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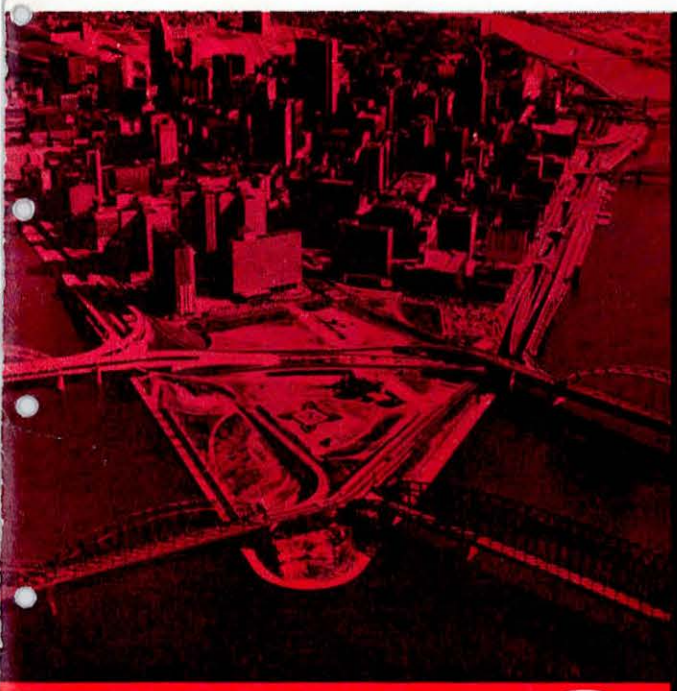
Can **improved rail transport** slow down the movement toward Scatteropolis? . . . . . p. 46

November 1, 1965

RAILWAY AGE WEEKLY



PITTSBURGH

A city in transit —in more ways than one p. 19

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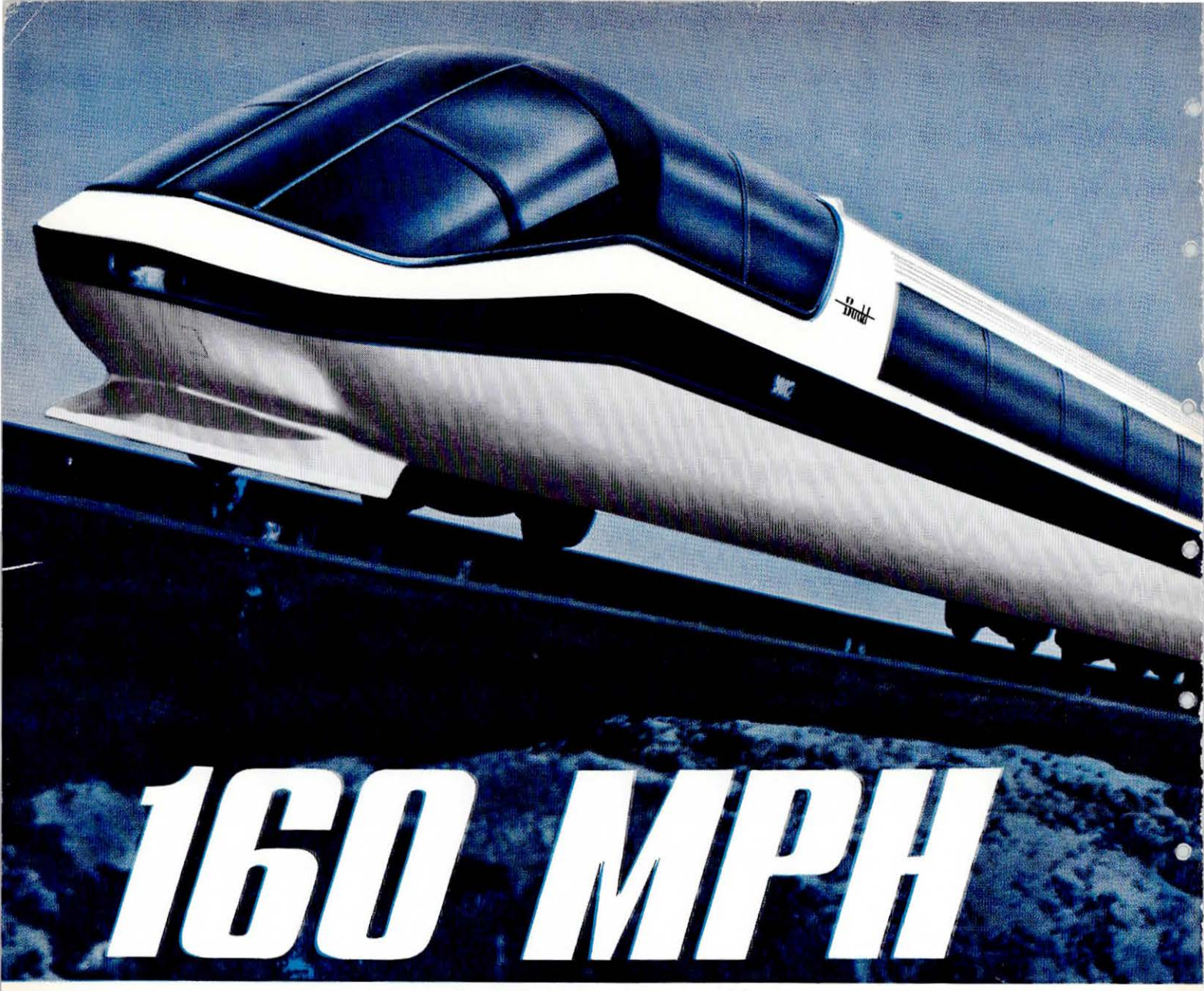

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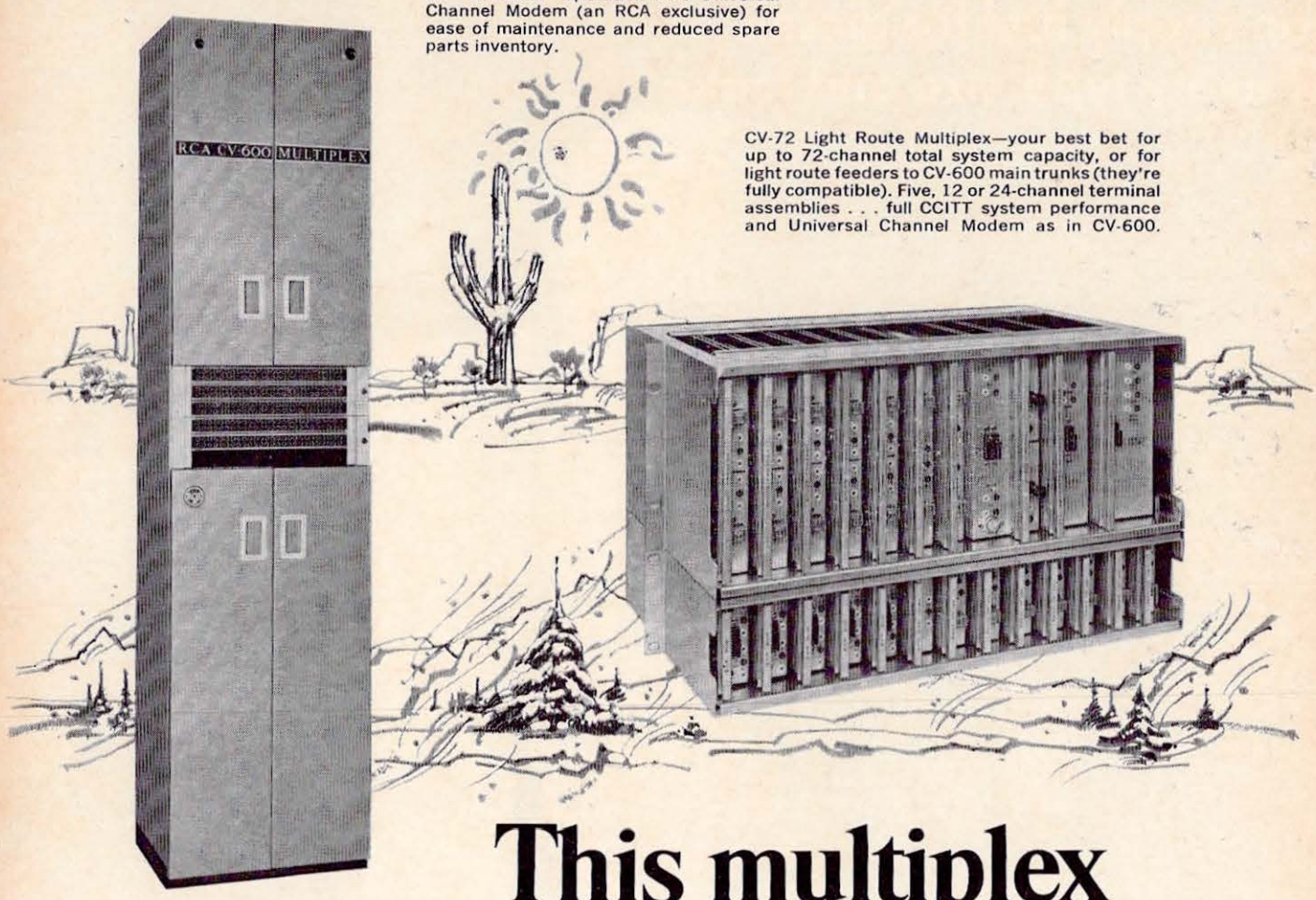

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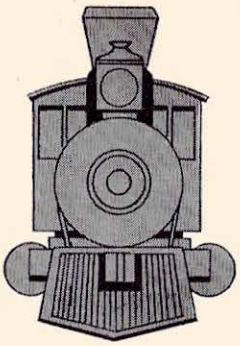

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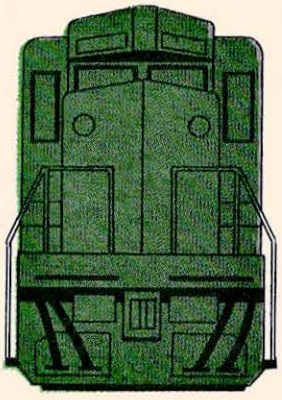

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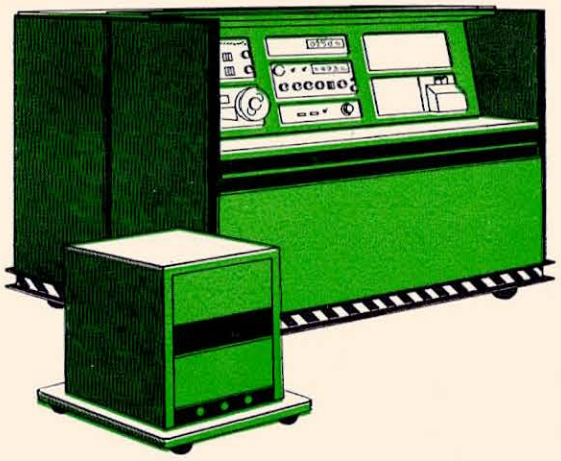
AUTOMATIC DIESEL ELECTRIC POWER TESTING



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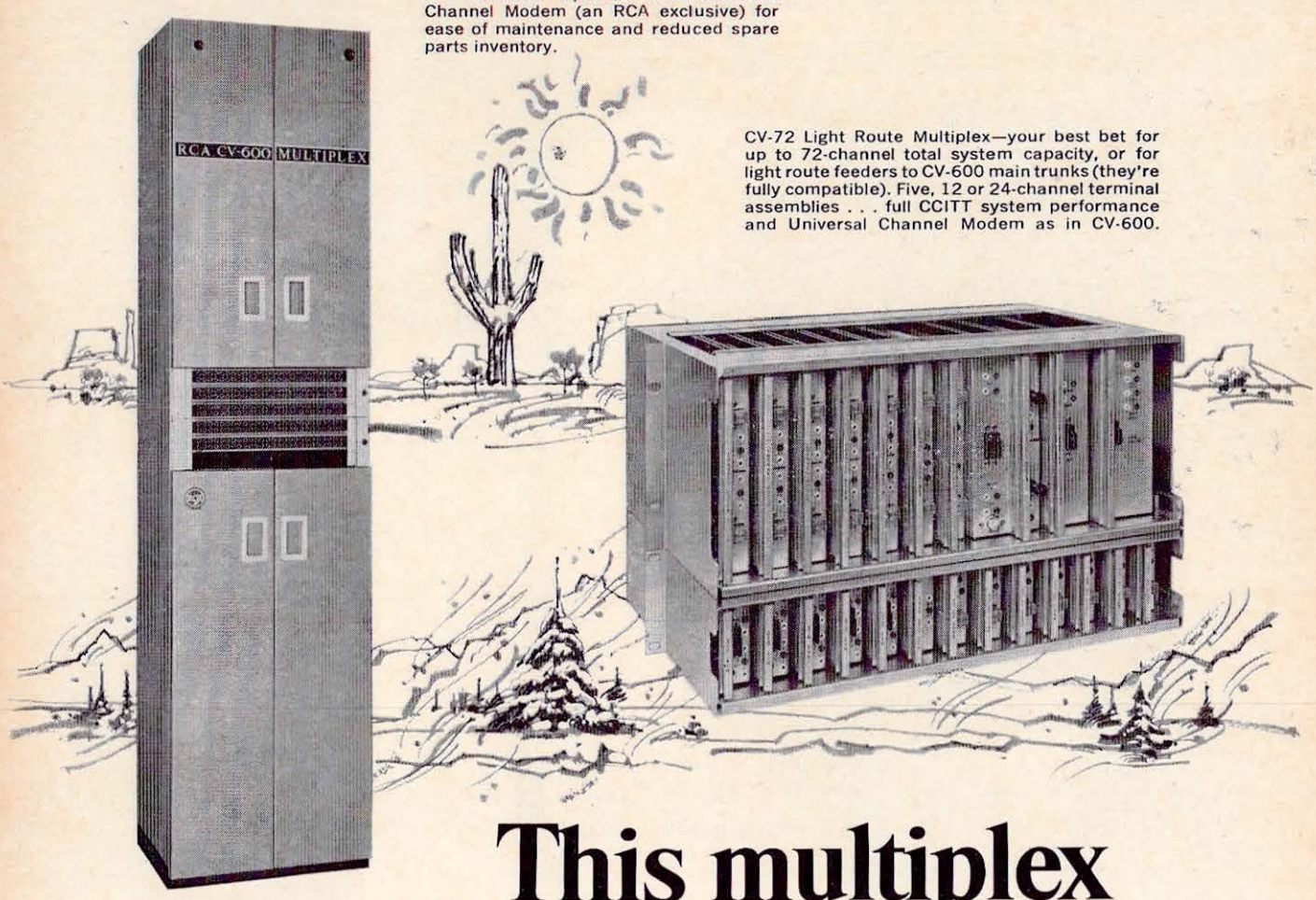

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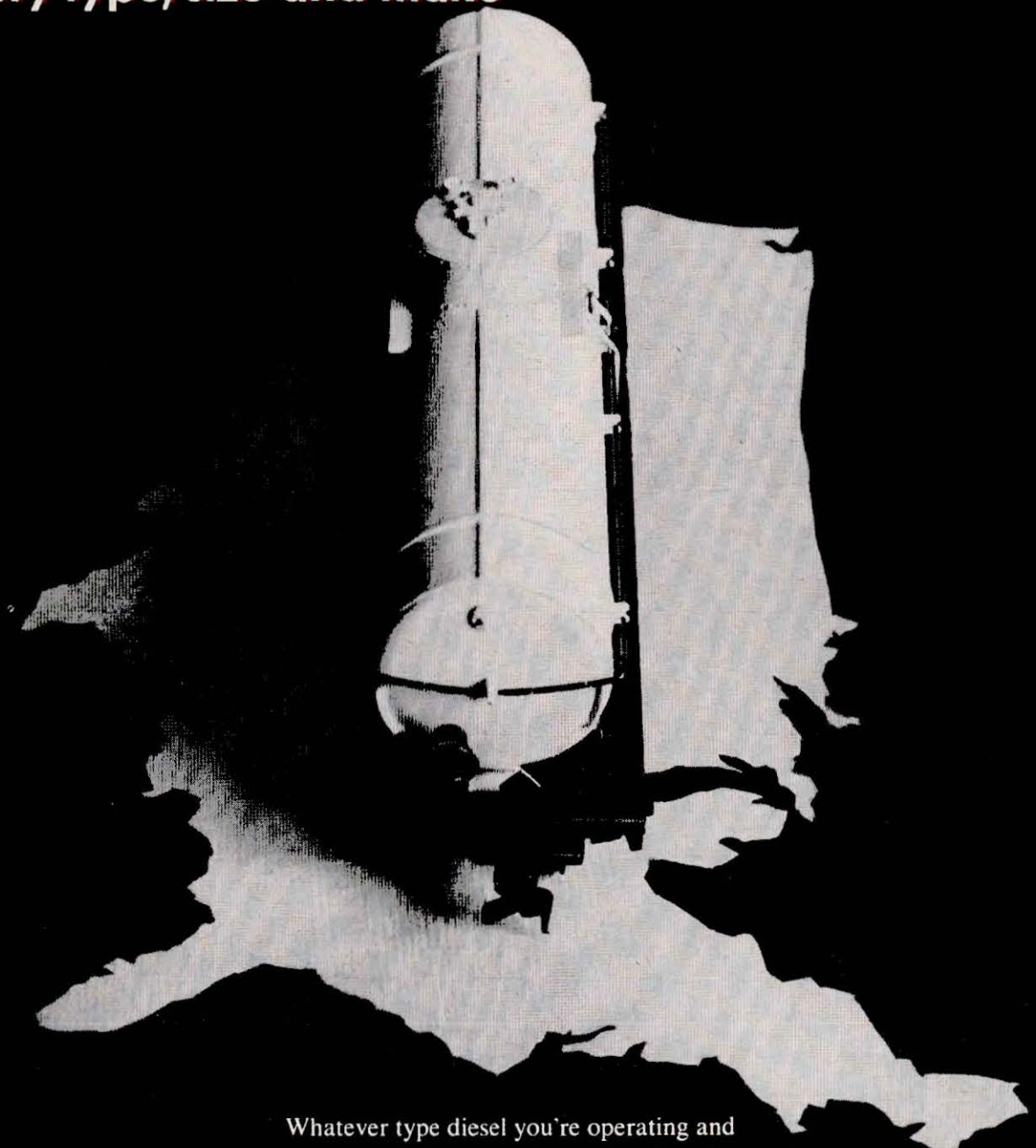

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November 1, 1965 • Vol. 159, No. 17

PITTSBURGH

GEARED TO TRANSIT

The city where transit is such a major "export" business is now beginning to apply some of its know-how on home grounds p. 19

Big cars go into regular service

Last week, the 150-ton freight car moved out of the experimental class and into regular service.....**p.11**

'More traffic will call for more cars'

An immediate increase in the net freight car fleet was called for at NASAB's Los Angeles meeting.....**p.36**

The Action Page—All urban travel by rail?

Proponents of urban travel by rail should be familiar with the case for the automobile and bus.....**p.46**

Departments

As the Publisher Sees It	12	Railway Market	41
Freight Carloadings	41	Short and Significant	7
Monday Morning Report	8	Supply Trade	43
New Equipment	41	The Action Page	46
New Products Report	34	Watching Washington	44
People in the News	43	You Ought to Know	42
Railroading After Hours	35		

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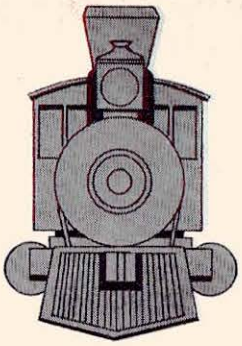

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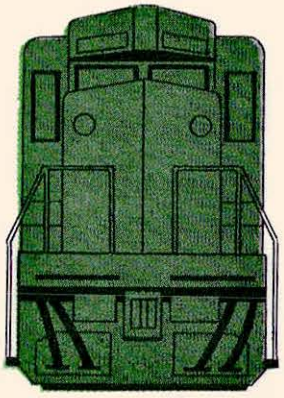

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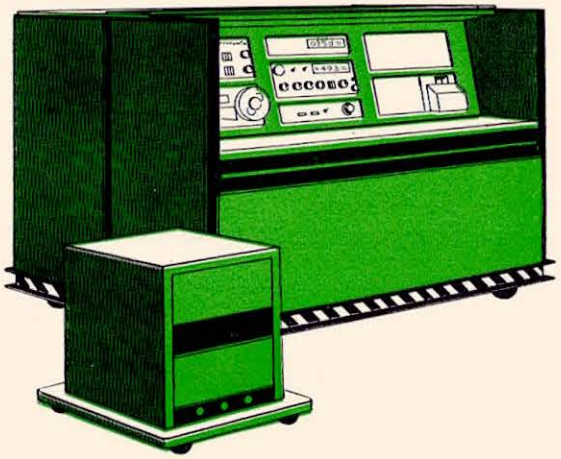

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SHORT AND SIGNIFICANT

Southern seeks to acquire the Frisco

When Santa Fe and Frisco broke off merger talks two months ago, the big question was, "Which way will Frisco move now?" Those who thought Frisco would look southward (RA, Aug. 23, p. 11) were correct. Last week a joint announcement by the presidents of the Southern and the Frisco disclosed that negotiations were under way looking toward acquisition of the latter by the former. Successful completion of these negotiations would push the Southern System across the Mississippi and deep into the heart of Texas, as well as Oklahoma and Kansas. A few years ago Frisco and Southern were rivals for control of the Central of Georgia. Southern won that one (RA, Nov. 19, 1962, p. 28).

●

Turbine car test planned for the Long Island

New York's Metropolitan Commuter Transportation Authority, the state agency that will soon take over the Long Island Rail Road, announced last week that it plans to undertake high-speed passenger-service tests using a gas turbine-powered car. The Authority says the experiment, on a 20-mile nonelectrified stretch of the road, would cost about $1.2 million. The Authority says it plans to ask the federal government to help finance the project, for which the Budd Company would design and build the car. Meanwhile, in Boston, Dr. Robert A. Nelson, director of transportation and research for the U.S. Department of Commerce, said that a gas turbine car will be operating on the New Haven's tracks between Boston and Providence within 15 months. The experiment would be part of the government-sponsored High-Speed Ground Transportation Program designed to improve transportation in high-population areas, such as the Northeast Corridor. About 5 or 6 cars would be used in the tests, and bids are expected to be asked in about a month.

●

How to divide RI—ATSF-C&NW version

A third variation on the splitting up of Rock Island came into being last week—this one proposed by Santa Fe and Chicago & North Western Managements of the two roads (and Santa Fe's directors) have approved a plan calling for payment of $100 million by ATSF for all RI lines south of Herington, Kan., and a line between Herington and Salina, Kan. In addition, Santa Fe would acquire trackage rights over RI between Kansas City and St. Louis. Rock Island's main line between Kansas City and Tucumcari, N.M., would not be affected.

●

Meanwhile, UP and D&RGW have their plans

Previously, of course, Union Pacific—which wants merger with RI—announced a proposal to sell Rock Island's southern and southwestern lines to Southern Pacific, in the event UP-RI gets the ICC's approval. And Rio Grande, which opposes the UP-RI tie-up, wants to acquire Rock Island lines between Denver and the Missouri River if UP-RI does come about. The new proposal for cutting up RI is an "if" thing: C&NW Chairman Ben W. Heineman says the agreement doesn't change his road's position with respect to its application for sole control of and eventual merger with Rock Island—but if the ICC decides division of RI is best, then North Western favors division with Santa Fe. ATSF, meanwhile, wants RI to be split according to terms of the Santa Fe-North Western agreement—but if the ICC decides against a division, then President Ernest S. Marsh says Santa Fe favors C&NW control of Rock Island. Applications covering the ATSF-C&NW agreement will be filed shortly—and the proposal itself will be submitted to North Western's board for approval Nov. 4.

MONDAY MORNING REPORT

The manpower shoe: pinching in yet another direction

According to personnel experts, shortages of competent men are ahead for railroads that fail to do thoughtful and resourceful manpower planning now. Waves of technological changes are remaking the industry and also rearranging traditional pecking orders on individual railroads. The problem is less well publicized than the long struggle with the operating unions over obsolete jobs—but it may be just as urgent. The need for long-term manpower planning to fill old jobs that have new skill requirements or to fill jobs that didn't even exist a decade ago is, say the professional personnel men, getting more acute by the day. It isn't purely a railroad problem. Many industries are in a scramble for talented, qualified managerial help. Some non-railroad companies are already trying to match men and jobs with computers in an attempt to head off shortages of qualified people for promotion.

Planning, evaluation programs needed now

While no railroad is scouting talent via computer, one or two are undertaking full-scale manpower planning studies—to see what they'll be needing by 1970. A few more railroads are attempting to evaluate personnel and set up performance standards for management jobs. A respectable number of railroads are already recruiting and training men for management needs in years to come. But personnel experts generally feel that hit-and-miss managerial development is still closer to an industry norm and that this style is unpredictable and costly. The pros feel that rising costs, trends toward specialization and greatly increased competition for talent make manpower planning a must.

Planning for what?

C. J. Prange, president of the Railroad Personnel Association and director of personnel development for REA Express, told top personnel officers from more than 30 railroads at the RPA meeting in St. Charles, Ill., last month that development of leadership able to "cash in on the competitive edge technology is giving the railroads," will not likely come in haphazard fashion. He stressed the qualities personnel officers will need to have in order to get the manpower planning job done: "Drive, imagination, common sense and the ability to communicate." Men with these qualities will also be needed to fill other vital railroad posts.

The pinch is producing personnel piracy

This kind of talent is always hard to find. The industry is missing whole generations of employees because of hiring gaps during the depression (when few were hired), World War II (when hiring was from groups not required for the war effort) and the post-war inability of the industry to attract substantial numbers of highly-qualified people. Staffing of some supervisory and managerial posts is getting more difficult. Raiding of people from other railroads and outside industry is, in the view of many experts, at an all-time high—and rising. It is intensified by raiding from suppliers. They are feeling the same pressures.

How will planning and evaluation help?

Experts feel manpower planning and evaluation is a must—even though they are far from agreeing how to do it. They agree, however, that such activity will help broad organizational planning; help identify manpower problems; help secure adequate manpower; help avoid waste, and, ultimately, help maximize results to be obtained from the industry's brightening commercial prospects.

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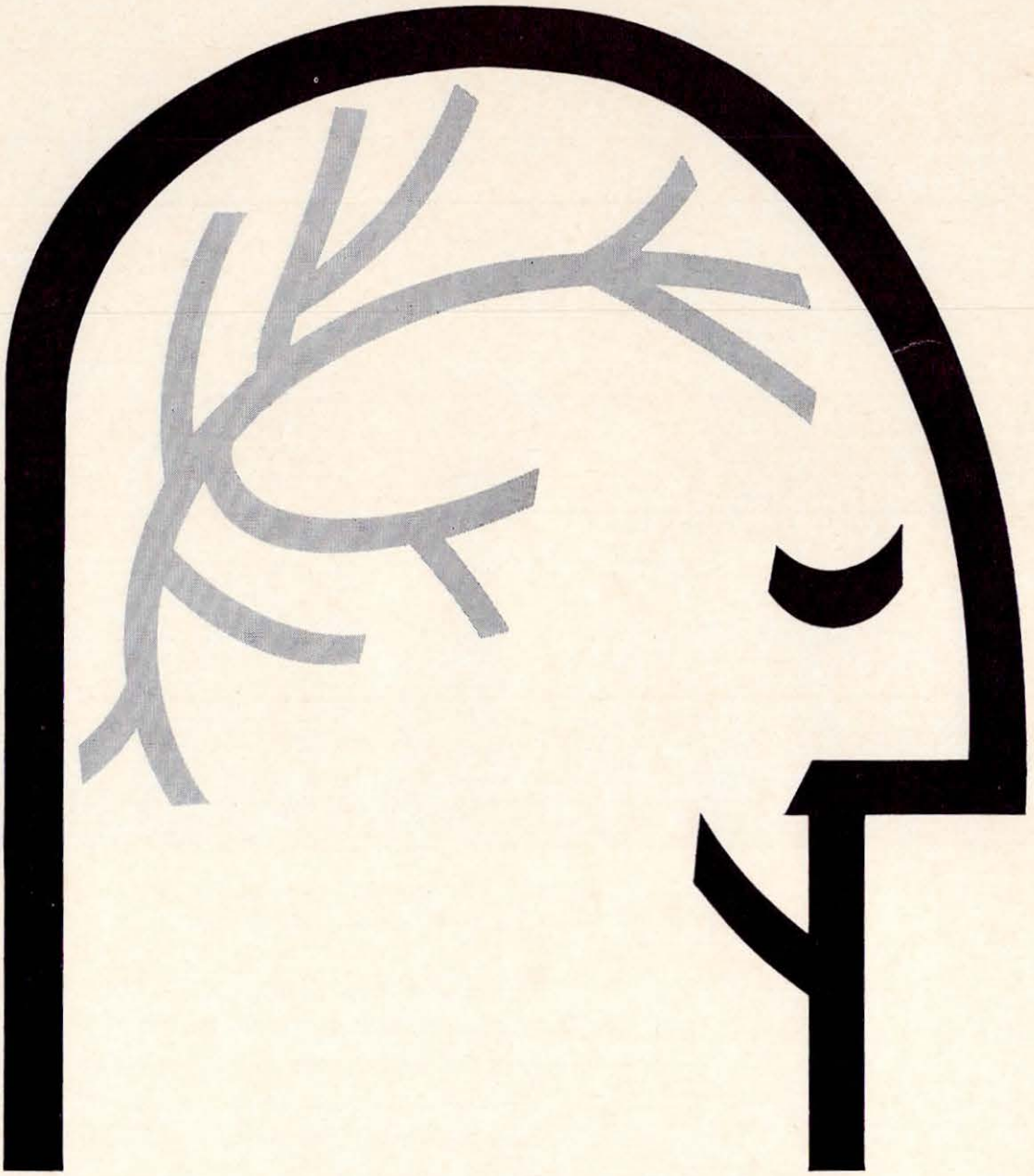

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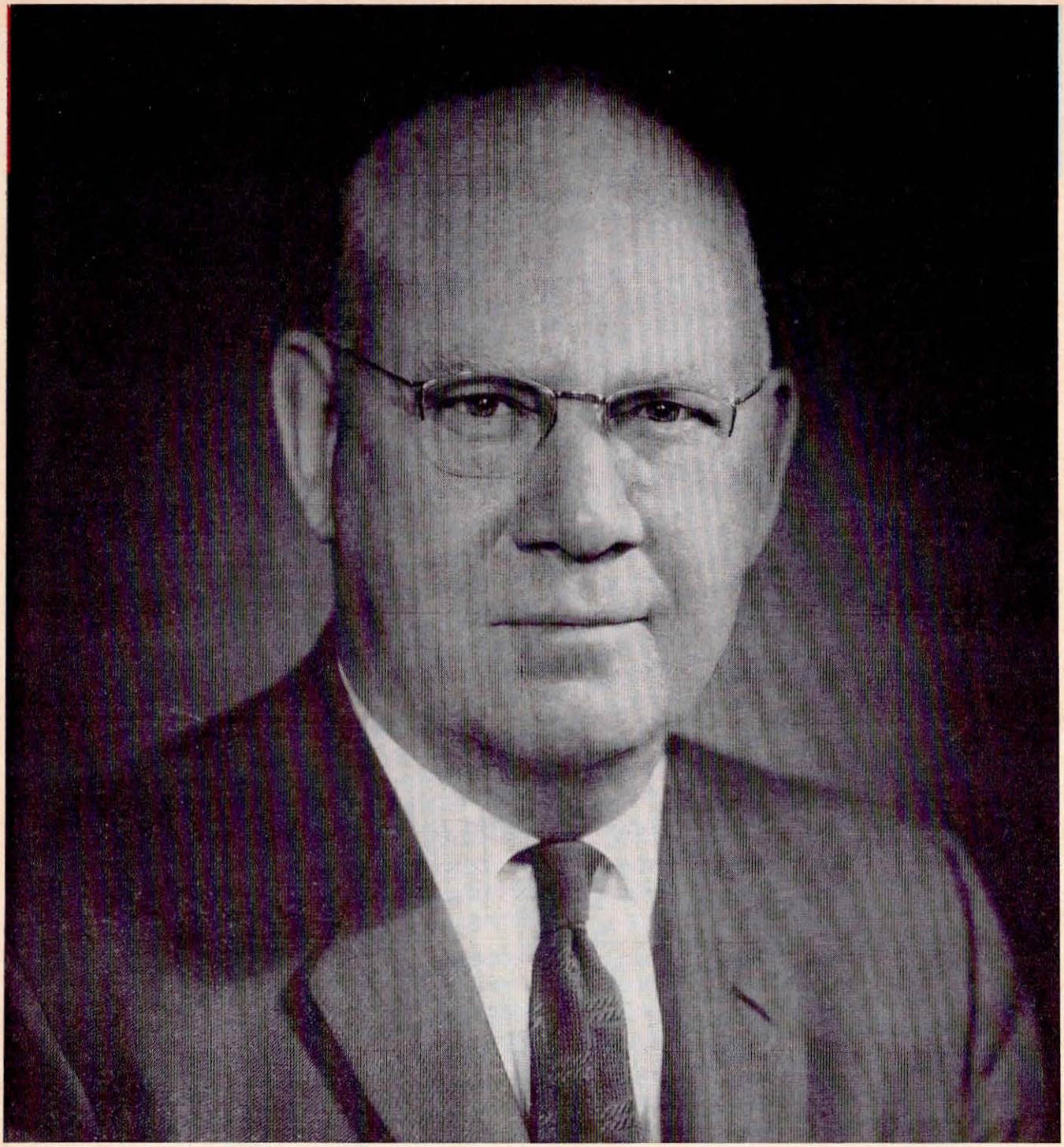

Photo: Fabian Bachrach

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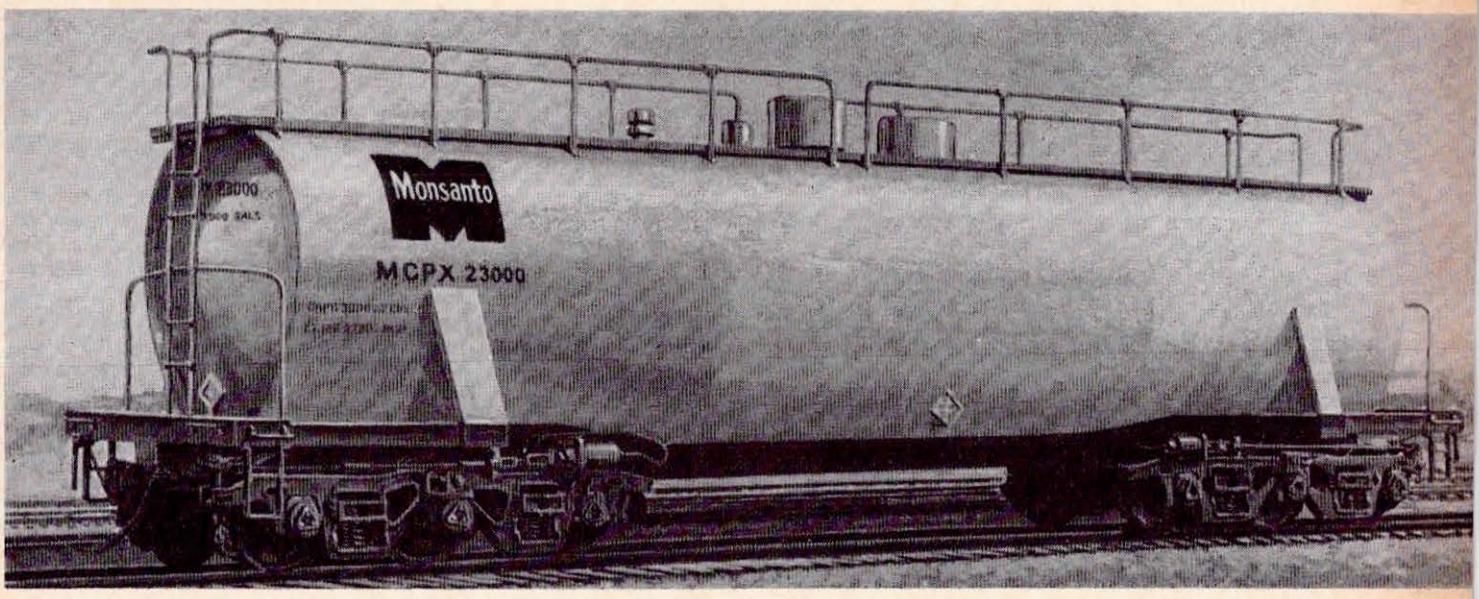
RAILWAY AGE WEEKLY
NOVEMBER 1, 1965

The big cars become regulars



In the last couple of years 150-ton freight cars have been put through the paces of experimental testing—and have stirred up a controversy over economics and engineering. But now the first of these giants are going into regular service.

The 150-ton freight car, until now considered experimental, moved out of that category late last week as Monsanto, the chemical manufacturer, announced that it is acquiring 37 tank cars of this capacity for regular phosphorus service. While the commodity for which these cars are designed is somewhat exceptional, previous reservations about six-wheel trucks and high total loads on track and structures seem no longer to be a bar against such cars moving in interchange.

The 1960s have been marked by a rapid upward surge in freight-car capacities, regardless of the types of cars involved and the services for which they are intended. While approximately 25 years passed between general adoption of the 70-ton and the 100-ton car, and again between adoption of the 100-ton and the 125-ton car, the jump from 125 tons to 150 tons has come in about 18 months.

● **Controversial question.** The past few years have been filled with discussions about problems of economics and engineering involved with high-capacity freight cars and their running gear. Two experimental cars—a Norfolk & Western hopper and an Atlantic Coast Line covered hopper—have already been in service to test the servicability of cars capable of transporting up to 150 tons under normal main-l ne operating conditions.

The Pennsylvania has recently announced plans for building three additional experimental 150-ton cars—a covered hopper and two tank cars. Actually, the 150-ton car for special service — and some of much higher capacity—have been used for many years. Movements of these cars, however, are normally considered special—with speed and route restrictions rigidly enforced.

● **Elemental phosphorus.** In announcing the $1.4 million order with ACF Industries, Monsanto pointed out that its cars will initially be used to transport elemental phosphorus from its Soda Springs, Idaho, plant to other company facilities throughout the country for further processing. Elemental phosphorus is used mainly for produc-

As the Publisher sees it . . .

Some cynical layout man once said that a magazine needs editorial pages to keep the ads apart.

Whatever truth there may be in this, it is equally true that a magazine needs ads to keep the editorial pages apart. A great deal of the liveliness, interest and picture impact of a magazine such as Railway Age comes from its advertising. One of our people did some work on a publication sponsored by the government for the aviation industry during the last war. He tells me that the editors used to say wistfully: "If only we had some ads to spark up the issue!"

At any rate, there's no question but that the readers of Railway Age spend a great deal of time studying the information offered in advertising. We employ one of the best researchers in the business—Mills Shepard—to tell us who reads what in Railway Age. Our editors' interest is primarily in learning what our readers want and giving them more of it. But Shepard studies an entire issue—ads as well as editorial—and advertising gets extremely high reading. Some ads get as high as 77% for "Noted." This, I am sure, is one reason why advertisers invest about half again as much more advertising money in the Railway Age Group of publications than in any other publisher's competitive magazine line-up. Here are the current figures, first ten months of 1965. . .

RAILWAY AGE GROUP: $1,239,060

NEAREST COMPETITOR: $833,305

In fact, advertisers invest more money in specialized, weekly Railway Age alone than in the nearest competitor's "all purpose" monthly.

RAILWAY AGE ALONE: $851,160

This is how advertising investment looks in terms of pages used rather than dollars. . .

RAILWAY AGE GROUP: 2,661 PAGES

NEAREST COMPETITOR: 1,149 PAGES

RAILWAY AGE ALONE: 1,384 PAGES

While some readers will be familiar with the entire Railway Age Group, perhaps I should spell it out. One of our publications has been serving the railway industry for 133 years, another for 109. So it is long experience that has taught us that the far-flung, variegated railroad industry needs specialized publications to serve its various specialized informational requirements. Thus we publish what advertising media men call a "horizontal weekly"—Railway Age—to serve the over-all industry's need for a publication that breaks as fast as does business and technical news in the industry itself. And to serve the specialized informational needs of men in each department of the industry, we publish what media men call "vertical monthlies": Railway Track and Structures, Railway Locomotives and Cars, Railway Signaling and Communications, Railway Purchases and Stores.

So far as the world railway industry is concerned, five years ago we carried our belief in specialization to the point where we launched International Railway Journal. While its advertising support is not included in any of the figures above, which are purely domestic, I might say that the support has been extremely strong.

tion of industrial and food phosphates.

Because the material, weighing approximately 14.5 pounds per gallon, is one of the heaviest commodities normally transported in tank cars, capacity will be only 22,900 gallons. While this sounds relatively low in terms of today's tank cars built to handle petroleum products, the rail load of the filled Monsanto car will be 414,000 pounds.

● **Cooperative design.** Engineers from Monsanto; ACF; American Steel Foundries — the truck supplier; and Union Pacific—originating carrier, cooperated closely in design of the cars. One of the important factors considered by Monsanto, according to W. A. Cedeck, transportation manager of the Inorganic Chemicals Division, was the net-to-tare ratio. With a payload of 325,000 pounds and a light weight of 87,300 pounds, the car has a "highly efficient" net-to-tare ratio of 3.7.

When Monsanto's Soda Springs plant began operating in 1952, the standard phosphorus tank car carried a 100,000-pound payload with a tare of approximately 58,000 pounds (ratio: 1.7 to 1). In 1958 the UP and Monsanto pioneered in developing the "king size" tank car now used by all major phosphorus producers. This car with a 12,500-gallon capacity, has a net-to-tare ratio of 2.65.

● **Lower railroad costs.** Cedeck emphasized that the new car's ratio will materially aid the railroads' operating costs by substantially reducing costs per unit handled. J. R. MacAnally, UP vice president-traffic, said his road is much interested in improving net-to-tare ratios, noting that it opens the way for hauling heavier payloads over longer distances. He added that it aids industrial development in UP territory.

J. S. Carlson, ACF vice president and Shippers' Car Line Division general manager, points out that the car has a number of innovations and design features, some contributing materially to its large load-carrying ability. The dome has been eliminated and tank appurtenances have been spaced so that the car meets AAR Plate C clearances.

The two-diameter tank and elimination of the center sill also reduce the car's weight. An aluminum alloy outer shell covers the foamed-in-place urethane insulation.

"The successful handling of the car's extremely heavy weight is made possible," caid Carlson, "by the use of six-wheel, articulated trucks. They distribute the load over the six axles to permit high-speed service with adequate lateral and horizontal load equalization." The cars are being manufactured at the ACF plant at Milton, Pa. Trucks were designed and manufactured by American Steel Foundries. ■

BARTD beauty...custom designed passenger comfort

Beginning in 1968, San Francisco Bay Area Rapid Transit District passengers will be pampered. Comfortable, quiet, beautiful trains will cruise smoothly at 80 mph.

Car design to win and keep passengers for the history-making new transit system was created by a unique team which spent many months developing the BARTD transit car.

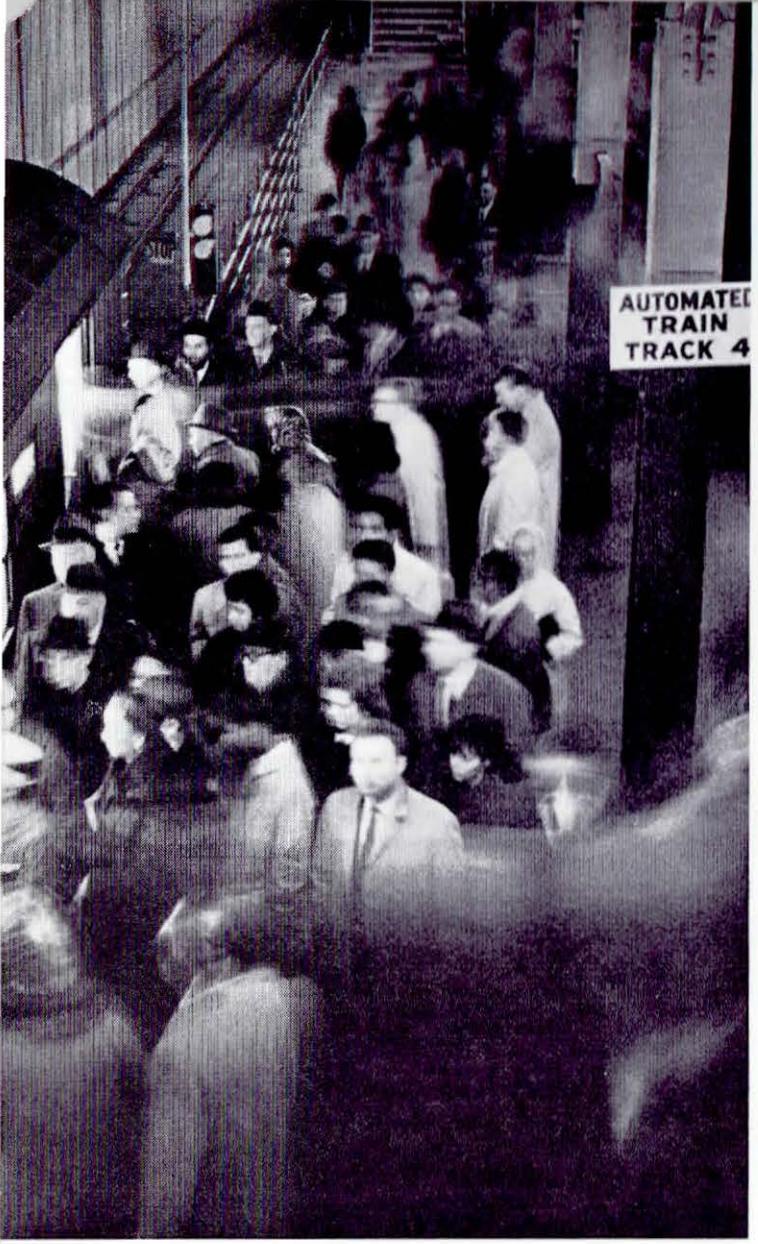
Sundberg-Ferar, Inc., industrial designers, teamed with General Steel Industries, Inc., St. Louis Car Division, created the full scale model BARTD car.

Working with BARTD and its engineering consultants, Parsons Brinckerhoff-Tudor-Bechtel, the design team analyzed every consideration of service, convenience, comfort and practicality.

Engineering studies by St. Louis Car Division assure construction feasibility of the design.

The result is car design of unexcelled beauty and comfort, custom fitted to the needs of the Bay Area rider— a car which embodies the BARTD byword: PAMPER THE PASSENGER!

GENERAL STEEL INDUSTRIES INC.
ST. LOUIS CAR DIVISION
ST. LOUIS, MO. • PHILADELPHIA, PA. • SAN FRANCISCO, CALIF.



No accidents in 70 million passenger miles

. . . and no motorman needed

WABCO engineering has now proved beyond a doubt that completely automated mass transit is practical. During a two-year feasibility trial held in New York, over 70 million passengers rode without accident in the world's first fully automatic train. Starting, speed control, stopping, even door opening and closing were entirely automated.

Where maximum automation is not presently called for, look to WABCO for aid in upgrading present systems. WABCO's "building block" concept, adaptable to any urban transit system, provides a means of modernizing on a gradual basis, compatible with fiscal policy. Step-at-a-time automation assures you of greatly increased capacity, efficiency and safety without shackling budgets.

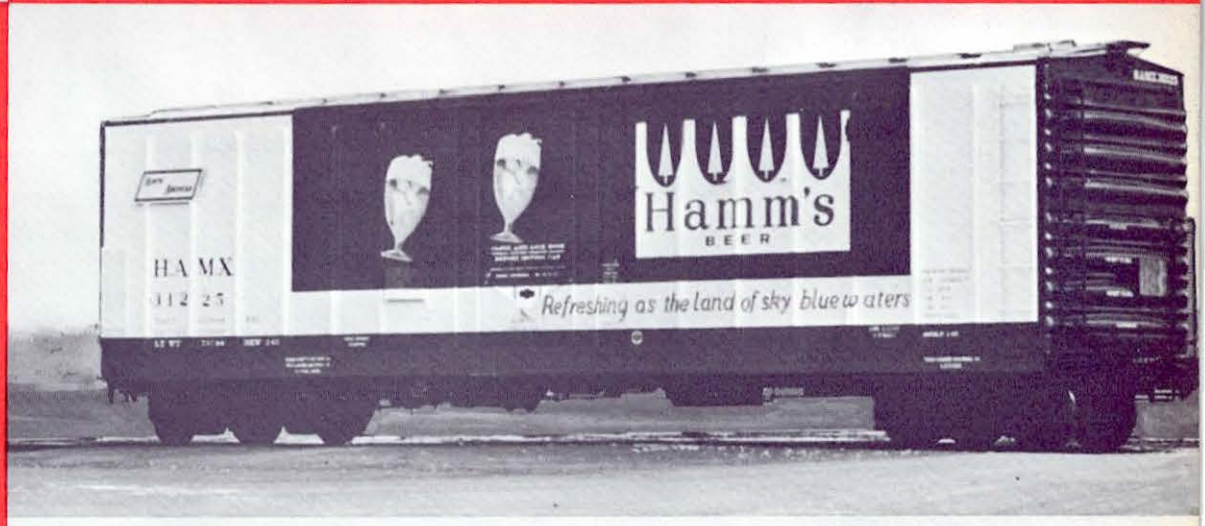
WABCO's spectrum of Mass Transit equipment includes everything from revolutionary suspension systems to new, automatic switches, couplers, and braking systems (electric or air), plus computerized dispatching, routing and speed controls. These "building blocks" are today being demonstrated on prototype Mass Transit systems of tomorrow.

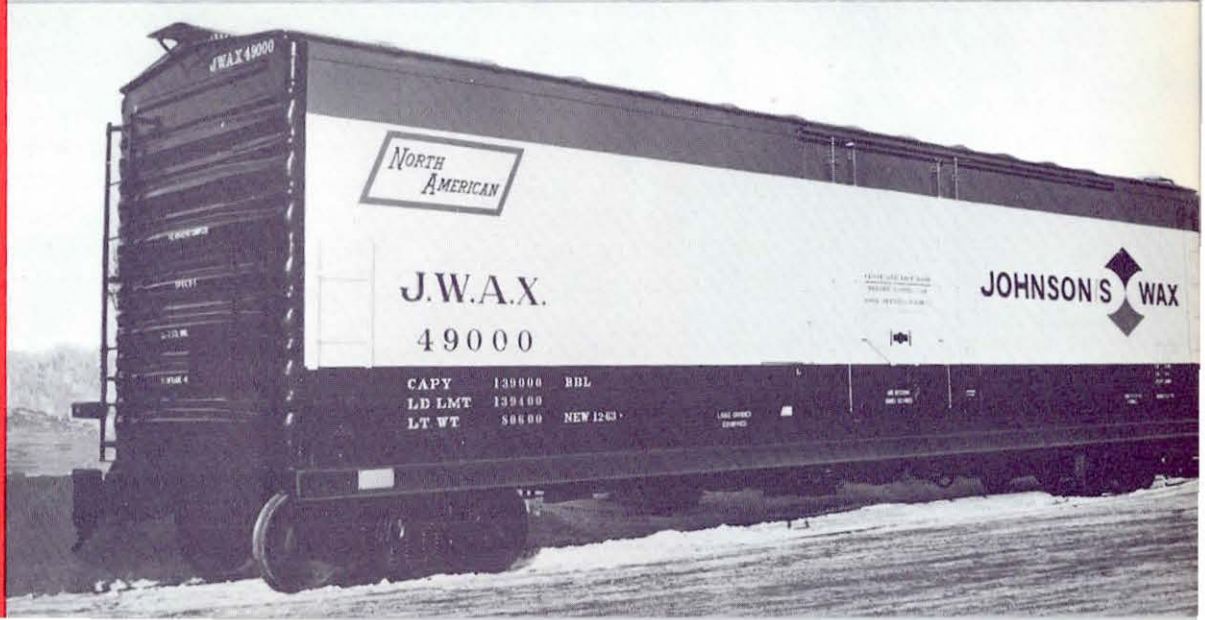
Whether your transit program is in the planning stage or needs a transfusion to keep abreast of urban growth problems, WABCO's building-block concept can sharply reduce costs. A phone call will bring you an engineering team with the proof. Why not consult your calendar now and call: *WABCO Mass Transit Center, Westinghouse Air Brake Company, Pittsburgh, Pennsylvania 15218. Phone 412-242-3434.*

WABCO
MASS TRANSIT CENTER

Circle 7 on reader service card

Over 3,000 void-free cars equipped with LANDRETH Pre-molded Urethane foam Panels*





*Patents Pending

Reduce labor costs with easy-to-install LANDRETH Pre-molded Urethane foam Panels

Landreth continues to pioneer new equipment and systems for the transportation industry. Landreth's experienced engineers have dedicated over 60 years of service to the railroads as well as to the research and development of quality, labor-saving, and profit-making systems and products.

Our modern plants operating under controlled laboratory conditions, supervised by trained engineering specialists to insure the best possible insulation to suit your custom needs.

Ten foam machines, equipped to provide uniform volume and temperature control of the feed streams insure fast and efficient production.

Now you can free capital that would normally be invested in special facilities, research laboratories, engineering, and labor.

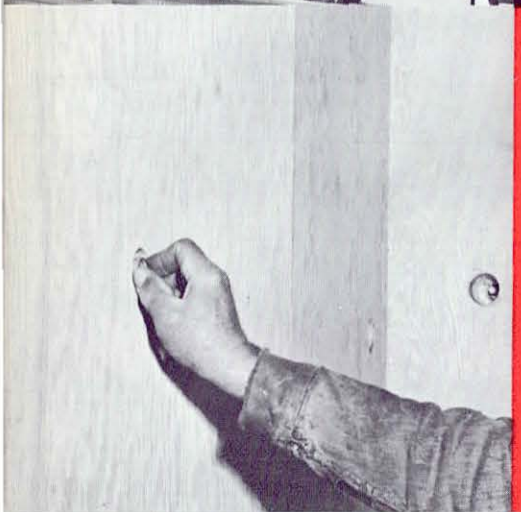
How to reduce costs and increase efficiency

1 Workmen lowering end panel into place. Panels are moved into production line on freight cars and lifted into cars on cranes.

2 Workmen lowering side panel into place.

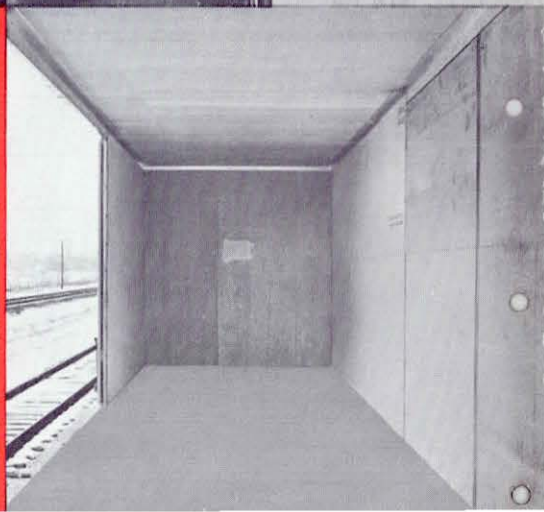
3 Workmen fitting side panels into place. Only 14 panels per car—panels are pre-trimmed, complete and ready to bolt into place for the sides, ends, ceiling, floor, and door.

4 Workmen fastening "Nelson" stud to outside post. Insulation thickness is reduced by ½ over conventional insulation materials.



5 Workmen inserting attaching device which when tightened, secures panel to side of car. This effective fastening system provides fastening without the normally associated heat loss.

6 Finished car. All joints foamed to insure a complete air-tight car.



Landreth panels increase insulation efficiency and cut costs

The new Landreth Pre-Molded Urethane Foam Panel enables railroads and car builders to build a better car faster and with less man hours in their shops.

The new Landreth system enables the builder to provide a Urethane Foam car without the necessity of installing special machinery and costly facilities.

Landreth Pre-molded URETHANE foam Panels engineered and proven best by test

The Inside Story of Budd Report #2238

The Landreth Insulated Car equipped with Landreth's Pre-Molded Urethane Foam Panels has just undergone exhaustive tests. After six months of road tests, the car was tested in The Budd Company testing laboratories in Philadelphia.

Here are the startling results from the Budd Laboratory's report.

The car constructed with the Landreth Pre-Molded Urethane Foam Panels was to be tested against two other cars constructed with Urethane Foam block. All the cars had been previously road tested for six months or longer.

The Landreth equipped car had absolutely no air leakage, no hot spots, and *no voids in the foam.* In addition, at 100 degrees differential, the car built with the Urethane Foam block had a BTU average of 143 BTU's per hour. The car equipped with the Landreth Pre-Molded Urethane Foam Panels also at 100 degrees differential and tested under the exact conditions, showed an average of just 93 BTU's per hour.

The Landreth Insulated Car was at least 50% more efficient than the car constructed with foam block. Conclusive proof that the Landreth Pre-Molded Urethane Foam Panel—is "Best by Test"!

Reduce labor costs with easy-to-install Landreth pre-molded Urethane foam panels*

Landreth Pre-Molded Urethane Foam Panels provide a lower K factor, as low as 0.11 (BTU's/sq. ft./hr./°F/in.) at 70 degrees as compared to 0.23 for conventional insulation. Over 90% of Urethane cells are closed. Thus, locking out moisture.

Check these features that make LANDRETH pre-molded Urethane foam panels*— best by test!

- ★ No Air Infiltration
- ★ No Localized Hot Spots
- ★ Non-Burning Foam
- ★ Easy Repairs
- ★ Seamless Vapor Barrier
- ★ Greater Thermal Efficiency
- ★ Thinner Walls
- ★ Completely Pre-Fabricated
- ★ Guarantee No Voids
- ★ All Joints Foamed
- ★ No Moisture Absorbtion
- ★ Odor Free and Non-Toxic
- ★ Fungus and Rot Proof
- ★ Added Structural Rigidity
- ★ Improves With Age—Does Not Deteriorate
- ★ Fire Proof
- ★ Does Not Split or Settle From Road Vibration or or Temperature Change

Highest quality controlled Urethane material on the market today

*Patents Pending

Landreth INDUSTRIES INC

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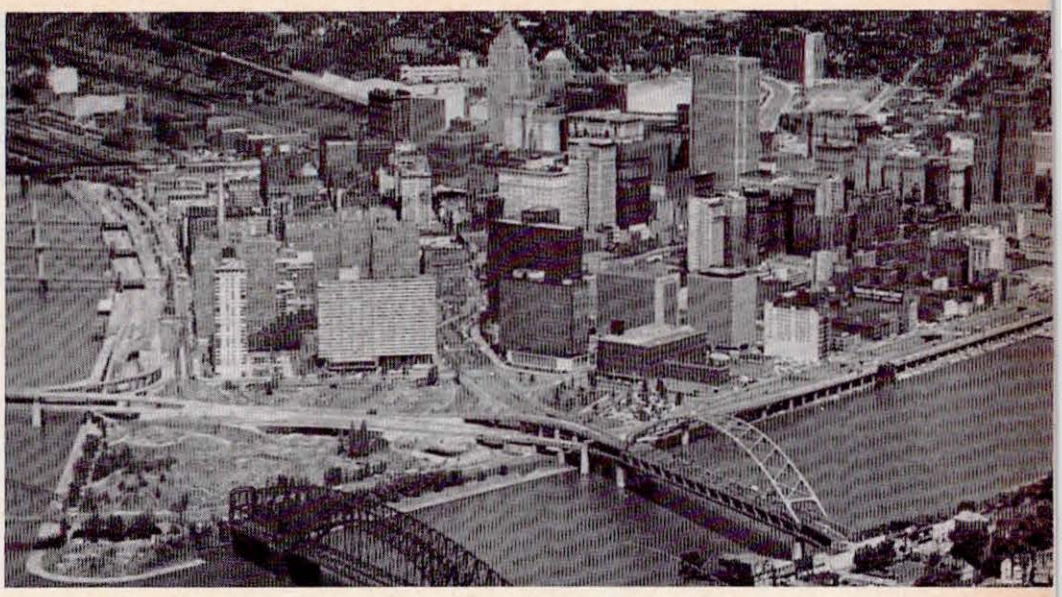


PITTSBURGH

Rail rapid transit in the cards?

The city with all that transit know-how is starting to apply some of it at home. Now on the way: A master plan for mass-transport.

Rapid transit moved a big step closer for the Pittsburgh area last week when the Port Authority of Allegheny County signed a formal contract with Parsons, Brinckerhoff, Quade & Douglass authorizing a mass transportation study.

At a time when the Port Authority's Transit Division (PAT) is steadily cutting back its street-car operation—and less than a year after it turned down a subsidy proposal which ended western Pennsylvania's largest rail commuter operation—it may be difficult for outsiders to envision rapid transit trains in Allegheny County's future.

But, if community leaders are to be believed, trains are virtually inevitable. "Mass transportation and then rapid transit are things we will need more and more as the population explosion continues," explains Dr. William McClelland, chairman of the three-man board of Allegheny County Commissioners, whose backing of a $45-million loan got PAT into business early in 1964.

● **Consolidating 33 operations.** It was between March and September 1964 that Pittsburgh Railways (including the largest surviving trolley operation in the United States) and 32 independent bus lines were acquired and consolidated into a single system. Consolidation is actually a continuing process which PAT officers today concede is far from complete.

"As soon as our present surface transit system is smoothed out we will undoubtedly go on to rapid transit," says Dr. McClelland. "We have to crawl before we can walk; county government has been doing everything to assist these first, and not always immediately appreciated, moves."

Appreciation of just what good public transportation can mean for urban areas such as that of the 274-square-mile Allegheny County, with its 1.6 million residents, also has developed on state and federal levels. The Commonwealth of Pennsylvania took its first step toward aiding mass transit in August 1963 with a $250,000 appropriation for planning and development of common-carrier mass transportation facilities.

● **Awakening the public.** In 1965 the Legislature passed, and Governor William Scranton signed, an act authorizing $12.9 million for urban mass transportation in Pennsylvania. This legislation had been pushed by State Senator Robert D. Fleming, Allegheny County legislator and member of the PAT board. "The Urban Mass Transportation Law," explains Judge Loran L. Lewis, chairman of the PAT board, "recognized that a good transportation system was absolutely necessary for the well-being of the people residing in the urban centers of population and that State aid was essential to provide such a system.

"It took years of work by many civic-minded and public-spirited citizens, plus countless traffic jams, to awaken the public and the members of the Legislature to the realization that perhaps an efficient mass transportation system is as important to the people in the urban centers as a good road network," says Judge Lewis.

Currently federal funds through the

1964 Aid-To-Transit program are being used primarily as 67% financing for a $23.5-million upgrading of PAT's conventional transit system and, through the Housing and Home Finance Agency, in a research program aimed at producing a new type of rapid transit for medium density routes—the Westinghouse (Electric) Transit Expressway, or Skybus.

● **No PAT answer—yet.** "Because Skybus dramatizes what can be done, explains John W. Dameron, PAT executive director, "it should do much toward making the people of Allegheny County more receptive to the rapid-transit proposals. The County commissioners are well pleased with results so far achieved. But PAT participation and the local interest does not mean that this necessarily is the transit system we would buy. We are leaving impartial appraisal of all possible methods to Parsons Brinckerhoff."

The demonstration project is financed 56% by the Housing and Home Finance Agency with matching funds from Commonwealth of Pennsylvania, Allegheny County, the Port Authority, Westinghouse Electric, (Welco), and a good crosssection of Pittsburgh-area transit suppliers; it is being conducted on a 9,300-ft aerial loop in one of the Allegheny County parks.

The new form of transportation which Dameron sees as possibly producing "equipment and techniques adaptable to transit systems throughout the nation" consists of small rubber-tired, guided rapid transit cars approximately 30 feet long, completely automated and designed to be operated singly, or in trains.

Unattended cars, like automatic elevators, could be operated on very close headway in off-peak hours.

● **30 weeks of tests.** The estimated $3-million cost of the Skybus development program swelled to $5 million as work progressed. Currently, the project is nearing the stage where completely automated operation of the three transit vehicles will be possible. Following will be 30 weeks of testing which will be the basis for the report PAT consultants must submit to HHFA. Welco, which now has a commitment for a system of this type for the Tampa (Fla.) International Airport, reportedly would like to continue development work on Skybus after the HHFA testing has been completed.

● **'Unique concentration.'** Even if Skybus should not be the answer to Pittsburgh's own rapid-transit requirements, there is no lack of local capabilities for solving the region's problems. "We have a unique concentration of 'hardware suppliers' and are indeed fortunate," notes a member of the PAT board.

"Public ownership of transit has ushered in a new era in the planning of metropolitan Pittsburgh . . . City, county and state planners are integrating transit into their programs . . ."

J. W. Dameron,
Executive Director, PAT

Over a dozen local firms, most of them long-term specialists in one or more phases of rail rapid transit design and fabrication, stand ready to aid PAT in filling almost any foreseeable requirement. This group of suppliers, now allied under the Urban Transportation Development Council of the Greater Pittsburgh Chamber of Commerce, is currently conducting a campaign to emphasize their over-all capabilities (see p. 22).

● **Present activity.** While dealing in futures both with Skybus and the Parsons-Brinckerhoff rapid-transit study, PAT is working steadily on its current operations. W. C. Gillman & Co., a firm of transit consultants, has been studying existing PAT surface routes with the goal of achieving a more cohesive operation. Because the companies which make up the present PAT system were acquired over a seven-month period last year, it is only now becoming possible to assess just how well PAT is doing. Dameron recently reported that September 1965 revenues were up 1% over the corresponding 1964 month, and he says patronage is also higher.

In the process of its formation, PAT acquired one Pittsburgh Railways route which could well be the basis for a rapid-transit operation in the future—the ten-mile Castle Shannon trolley operation on a private right-of-way. While there has been consideration of ways for improving this line, PAT's limited resources have had to be devoted to other, more pressing situations. Immediate concern was acquisition of 150 buses to replace badly deteriorated equipment acquired from some of the 32 bus lines. This was followed by a general abandonment of street-car operations on Pittsburgh's north side which required additional buses. Today, PAT operates over 275 trolleys, 800 buses, and one inclined plane.

● **Railroad commuters?** For a time during PAT's formation in 1964 it looked as if the agency might immediately be in the railroad commuter business. The Pennsylvania Railroad's Pittsburgh commuter operations, ailing for many years and up for discontinuance, were studied by PAT consultants in a last-ditch effort described by Judge Lewis as "an economic feasibility study to determine how—or if—the Pennsylvania's local passenger service, more especially its rights-of-way, could be integrated into a rapid-transit system."

Conclusions reached by PAT were much the same as those reached long before by the Pennsylvania: Not enough new business could be generated to justify either the costs of modernization or the costs that would be incurred in operating a rail commuter service. A 90-day extension of the commuter service to which the Pennsylvania agreed (so that the PAT study could be made) ended on Nov. 28, 1964—and with it Pittsburgh's most extensive railroad commuter operation (RA, Nov. 9, 1964, p.7). This left the Baltimore & Ohio's compact Pittsburgh-McKeesport suburban service, operated with RDC cars, and a longer-

haul Pittsburgh & Lake Erie operation as the only commuter rail services in the area.

• **Developing a master plan.** It was after the hurried study of the PRR service that Leland Hazard, chairman of PAT's Rapid Transit Committee, noted that the recurring necessity of conducting surveys on a piecemeal basis pointed up the need for developing a master plan for the Port Authority.

As with almost every major metropolitan area, there was no dearth of rapid-transit studies for the Pittsburgh area. In 1917 a 37.5-mile subway-elevated system was proposed; in 1926 the immediate construction of a 6.1-mile subway was suggested. As a 1963 report of the Pittsburgh Area Transportation Study put it, "Successive rapid-transit proposals have called for less extensive, but more expensive, plans." The 1963 study then called for a 16-mile system costing $94 million, noting that "the rapid-transit system should be started as soon as possible."

But the contract that PAT arranged with Parsons Brinckerhoff does not require that its new study be based on any previous proposals. Actually, the PBQ&D study group has been organized for some months and much of the groundwork for the rapid transit study has already been completed.

"Public ownership of transit has ushered in a new era in the planning of metropolitan Pittsburgh," explains Dameron. "For the first time the city, county, and state planners are integrating transit into their programs. This was not true in the past because of the disposition of the planners—they were absorbed in highways and parking garages."

• **No simple problem.** The Allegheny County region is not an easy one for rapid transit, according to PBQ&D engineers. Difficult topography not only complicates line location but also the reaching of suburban populations which have tended to settle on the tops of hills in recent years. The downtown core area rises directly at the banks of the Allegheny and Monongehela Rivers; entry to this 370-acre Golden Triangle will be complicated whether it be by subway or aerial line.

Looking toward 1975 and 1985, the rapid transit study will seek answers to these questions:

—Does the Allegheny County area need a rapid-transit system?

—If rapid transit is needed, exactly where should it go?

—What type or types of rapid transit should there be?

—How will costs compare with revenues?

—How can rapid transit be paid for?

• **'Something more sophisticated.'** At a time when Pennsylvania Governor Scranton is talking of a $1-billion expansion of Allegheny County highways, hints by PAT board members that a complete rapid transit system could be built for less than this figure have excited no civic misgivings. "The climate is changing and most citizens are probably ready for something more sophisticated than the private automobile," observes PAT Board Member Hazard.

"Allegheny County already has commitments in roads and parking garages which are three times the cost of a rapid transit system," explains Hazard. "If we are going to have cities, we are going to have to have rapid transit."

"While cities are on the move toward rapid transit," cautions Hazard, "there is great danger that people will assume we have rapid transit. Los Angeles and Pittsburgh have recently consolidated ancient, mostly decrepit, multiple street car and bus lines into one system owned by public authority. The first danger is the public will think that just by changing ownership some magic will be worked."

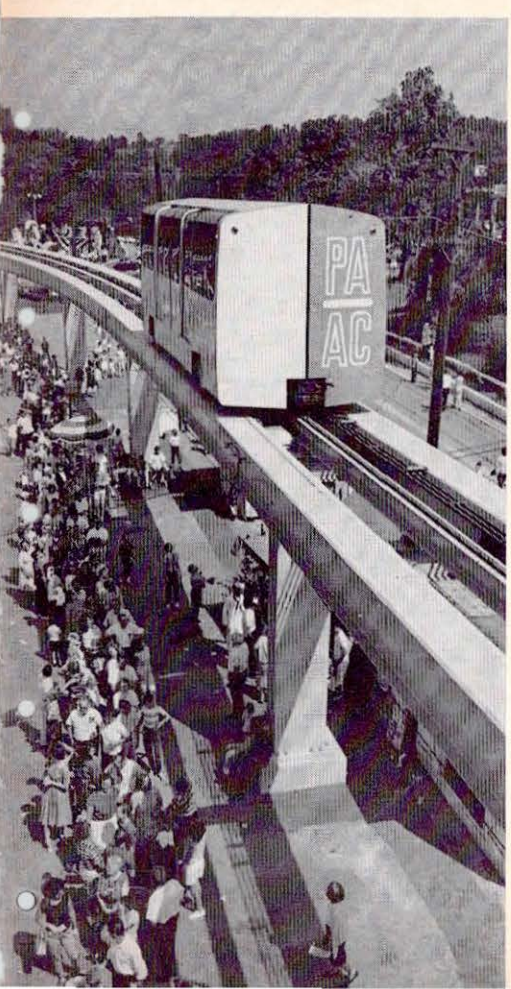
"There is danger that because large sums are expanded for new buses, the community will think it is getting rapid transit. Expenditures for new buses to travel nonexclusive rights-of-way are just 'treadmill' expenditures—necessary to keep a bad situation from getting worse.

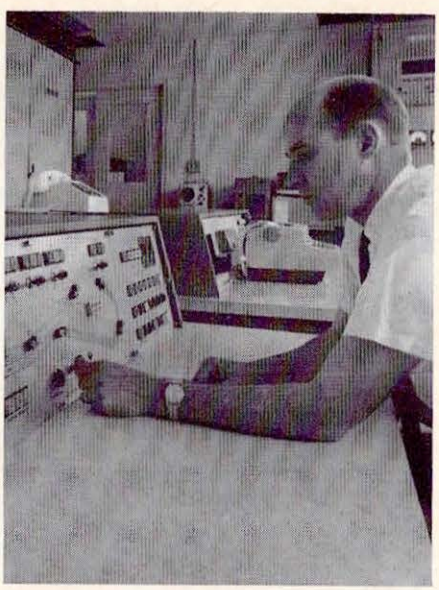
"There is even greater danger," Hazard adds, "that by publicizing so-called losses every month or every year, the public will get the impression that rapid transit is beyond its ability to support . . . No such psychology applies to a highway program scheduled to cost far more than a rapid-transit system . . . We shall stop these losses only when we make the new capital investment in a new system adequate for contemporary needs."

• **Paying the price.** Even the financing of a system which will inevitably cost upwards of $500 million should be no problem, says Hazard. By the time Allegheny County is ready to begin construction, he anticipates that the federal government will have assumed a bigger role in backing such projects.

"Value increase will pay for the capital expenditures, no matter what their source," says Hazard. "You only *finance* such projects with bond issues—they are paid for by the increase in values."

• **How fast?** It is expected that Allegheny County can cut the time table for an operating rapid transit system considerably shorter than has been the case for San Francisco, current model for all such projects. The Parsons Brinckerhoff study is expected to be completed in about 18 months. Hazard then estimates that financing might take two years and that initial segments of the system might be in operation four years after that—say by 1973 or 1974.





Transit expressway

Aerial loop 9,300 feet long was erected by Bethlehem Steel on Allegheny County Fair grounds. Skybus actually handled passengers during the recent fair (left). Control center (above) is at one end of elongated loop where Westinghouse Electric engineers are in last stages of preparing for full automatic operation.

International symposium: Another Pittsburgh 'First'

Along with its unprecedented concentration of transit know-how, the Pittsburgh area has now undertaken to provide a forum, without precedent, for exchange of ideas about urban transportation. Government, industrial, technical, financial, and academic leaders will participate in the First International Symposium on Urban Transportation Planning, which will take place February 1, 2 and 3, 1966, at Pittsburgh's Hilton Hotel.

"The Symposium will be confined to no single mode of transit," explains B. S. Chapple, Jr., administrative vice president, U.S. Steel, who is serving as chairman. "Urban transportation will be considered in all of its facets."

Says J. S. Purnell, chairman of the Greater Pittsburgh Chamber of Commerce's Urban Transportation Development Council: "No such conference – covering the whole spectrum, as opposed to specialized segments, of urban transportation on even a regional, let alone on an international scale – has ever been held. But proper transportation planning – and planning for proper growth of our cities – is truly an international problem. We hope and expect to perform a badly needed service for all major cities by bringing together the experts who understand the problem."

"All metropolitan regions, through their political and civic leaders, as well as through their transportation authorities, can benefit from such an interchange," adds Purnell, who is secretary and assistant to the president of T. Mellon & Sons.

The systems approach to mass transportation will be covered in depth. Ways and means of persuading the public to pay for proper transportation will be explored. One session will be devoted to urban development versus urban transportation. "What's Ahead for the Commuter?" will be the subject of another panel. Mayors of four major cities have been invited to discuss the development and progress of their own transportation planning.

SCOT model, U.S. Steel's transit-car concept, has steel sandwich panels and unprecedented glass area which would make possible 75-foot car weighing about 65,000 lbs.

PITTSBURGH

Suppliers offer a 'total approach'

In terms of both know-how and hardware, Pittsburgh-area companies have what it takes for 'total' mass-transit solutions.

Rapid transit looms large in the future of Pennsylvania's Allegheny County and of Pittsburgh, its hub. This region—the industrial, financial and cultural heart of Western Pennsylvania —is looking to rapid transit not only as a more effective method for mass movement of local commuters through its rugged terrain, but also as a significant spur for the local economy.

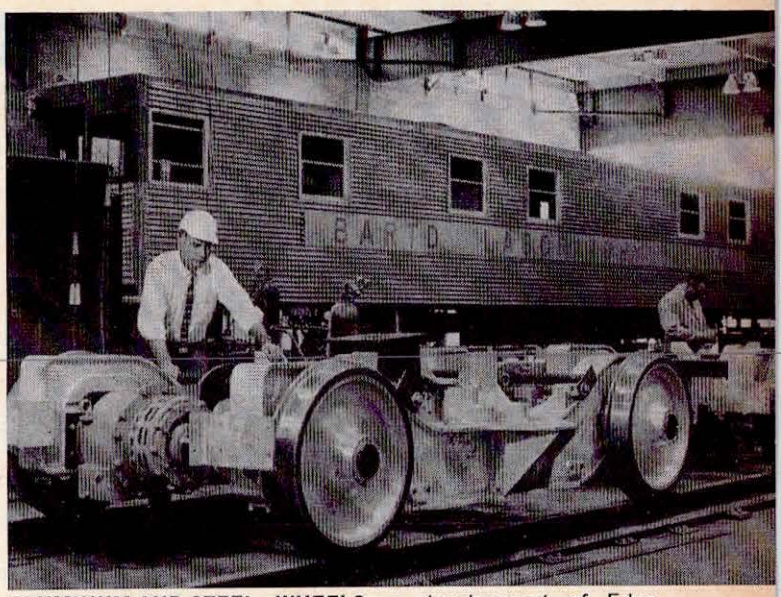
Just last week, while the Port Authority of Allegheny County was completing a formal contract for study of its own rapid-transit requirements, local business leaders were aggressively organizing a coordinated effort to present the Pittsburgh area as an unmatched center of mass transit know-how and manufacturing capabilities.

• **Concentrated capabilities.** "Where else could you find well over a dozen companies with the technical, fabricating and construction capabilities we have here?" asks a member of the Urban Transportation Development Council of the Chamber of Commerce of Greater Pittsburgh. Typical of the firms represented on the Council are Alcoa, Armco, Edgewater Steel, Pittsburgh Plate Glass, Pullman, Westinghouse Air Brake, Westinghouse Electric, and U.S. Steel.

"The Pittsburgh area has what must be pulled together in a total approach to solving today's mass transit problems," explains a Council spokesman. This appraisal of the region's capabilities was reinforced last week as W. Irving Osborne, president of Pullman, Inc., announced the establishment of the Pullman Inc. Transportation Systems Center at Pittsburgh.

Osborne told a Washington, D.C., group he anticipates that rapid-transit car-building, an activity of the Pullman-Standard Division, will show little increase over the next three or four years because of the long lead time involved in designing completely new transit systems. Near term car orders,

COMPUTER CONTROL for BART, produced by Union Switch & Signal, demonstrated by WABCO Transit Center's G. R. Schaefer.



ALUMINUM-AND-STEEL WHEELS, a development of Edgewater Steel, are currently being tested by BART and CTA.

said Osborne, must come from existing operations.

● **Pullman's new center.** Because the major portion of expenditures for new systems goes for engineering, right-of-way construction, and wayside equipment, Pullman estimates that considerably less than 10% of any new system's investment will be for rolling stock. "To be intimately involved in these new transit programs," explained Osborne, "Pullman has drawn on the knowledge, background and personnel from both of its main spheres of activity—transportation equipment, and engineering and construction—and has established the Pullman Inc. Transportation Systems Center. This unit will operate under the direction of the Pittsburgh-based Swindell-Dressler Division's Public Works Department with the objective of participating in some of the early stages of designing and engineering various phases of developing transportation systems."

The Swindell-Dressler group, in conjunction with Westinghouse Air Brake, recently submitted a proposal for an inter-terminal transportation system for a projected expansion of the Newark, N. J., airport. The proposal represented, according to Osborne, "a basically new approach in applying modern transit technology to the task of quickly moving people from terminal to terminal."

● **WABCO and Pullman.** Westinghouse Air Brake could bring into play in the Newark project the capabilities of its own three-year-old WABCO Mass Transit Center (RA, Jan. 4/11, p. 15) also based at Pittsburgh. Formation of the WABCO Center had both internal and external purposes. As Pullman is now doing, WABCO set out to coordinate the transit-related activities of all of its major units to serve the transit industry better as a supplier. It also aimed at providing a broader range of information, advice and services to urban planners, engineering consultants, transit authorities and others interested in the problems of mass transportation.

WABCO's total-systems approach to mass transportation means drawing most heavily on the Union Switch & Signal and Air Brake Divisions. Also involved, to varying degrees, are 90% Wabco-owned Melpar, specializing in space-age electronics; LeTourneau-Westinghouse, the heavy equipment subsidiary; and others.

● **Varied capabilities.** Along with automated control equipment such as is being supplied to Montreal's Expo '67 (see box, page 24), WABCO, through LeTourneau-Westinghouse, recently supplied a set of experimental transit-car trucks for testing by San Francisco's Bay Area Rapid Transit District. Unusual features include torque-proportioning differentials, which permit the two wheels on a common axle to rate at different speeds while being driven at all times, and a Hydrair suspension in which a compressed gas functions as the spring system. LeTourneau could bring into play more than 20 years' experience with similar torque-proportioning differentials on heavy, off-highway construction vehicles and more than seven years' experience with Hydrair suspensions on road-building equipment. Both are being called "firsts" in the railway field.

● **Edgewater wheels.** Another of BART's sets of experimental trucks incorporates an experimental product of Edgewater Steel, also a Pittsburgh area transit supplier. This is the aluminum center, steel-tired car wheel. Each wheel supplied to BART has an aluminum center weighing approximately 105 pounds and a steel rim weighing 275 pounds—a total of 380 pounds per wheel. This represents a weight saving of 100 pounds per wheel over the conventional all-steel type. Edgewater took the aluminum discs, forged by another supplier, and then machined them and fitted them with the steel rims.

Edgewater's aluminum-steel wheels have been under test for many months on the Chicago Transit Authority, an activity in which it has cooperated with the Aluminum Co. of America. "Alcoa has been working for over 30 years with St. Louis Car, Pullman-Standard, and other carbuilders to develop new and improved applications for aluminum in railroad and rapid-transit cars for passenger service," says R. E. Wilson, Alcoa manager of railroad industry sales.

● **Diverse applications.** "We feel strongly that aluminum will play an important role not only in transit-car construction, but in related facilities required for a completely modern transit system," says Wilson. Increasing atten-

RESEARCH, marketing and production capacity of U.S. Steel is being marshalled for transit market. L. B. Worthington (right), president, hears of tunnel developments from (l. to r.) R. L. Hardin, Jr., general manager—transportation marketing; R. F. Sentner, executive vice president; and B. S. Chapple, Jr., administrative vice president.

tion is being directed to car wheels, trucks, and power rail applications.

"Aluminum's ability to save 100 pounds of dead weight per wheel, or 800 pounds on each car," combined with aluminum car structural applications," adds Wilson, "means faster starts and stops—more efficient train operation. Alcoa is also cooperating in developing more economical aluminum applications for rapid-transit third rail. We are working with the Long Island and with BART in testing bi-metallic third-rail concepts; a 42-foot aluminum third rail has been in test on the Long Island since August 1962. We expect three or four developments—wheels and trucks, electrical systems, a major increase in aluminizing cars and structures related to rapid transit—to be significant in the next few years."

• **Systems approach.** Pittsburgh-headquartered U.S. Steel has recently taken a hard look at 42 metropolitan centers which could be building and implementing rapid-transit systems in coming years. The result: An all-out program of assistance to transit bodies involving a series of engineering and design ideas. "Construction costs of building the 42 systems," explains R. F. Sentner, executive vice president-commercial, "have been estimated at slightly more than $8 billion over the next 15 years. . . . These systems offer a potential market for steel of about six million tons."

As an aid in what U.S. Steel President L. B. Worthington calls "the rapid-transit renaissance," the company is seeking to "combine steel-making capability with the technical and engineering knowledge of U.S. Steel people to help customers use its products to their full potential."

• **Steel concepts.** A combined technical and popular presentation of U.S. Steel's new mass transportation concepts is now being made in cities having, or considering, rapid transit. R. L. Hardin, Jr., general manager of transportation marketing, reports that, following the initial showing in New York City (RA, Aug. 9/16, p. 15), the presentation is being made in Houston, Los Angeles, Chicago, St. Louis and Dallas-Fort Worth before the end of 1965. Already scheduled for 1966 are Pittsburgh, Washington, Atlanta and Detroit.

The new components involved are:

—Three types of steel tunnel liners.

—Passenger stations based on modular arrangements.

—Aerial structures featuring a noise-dampening composite steel and concrete girder.

—Electric utility structures.

—A full-scale "walk-in" model of a transit car called the new SCOT—"Steel Car of Tomorrow"—in which steel is used to perform engineering and aesthetic functions.

In addition to studies on cars, stations and structures prepared solely by U.S. Steel engineers, some design concepts have been developed jointly with B. F. Goodrich, Commercial Shearing & Stamping, Midland-Ross, and Pittsburgh Plate Glass. Pittsburgh Plate Glass, for instance, provided a special heat-absorbing, glare-reducing glass for the windows and skylights of the SCOT model, and Midland-Ross produced a space- and weight-saving automatic door control.

Metals capabilities has always been a term virtually synonymous with Pittsburgh. Along with Alcoa, Edgewater, and U.S. Steel, other local firms which are taking a long, hard look at the potentials for metals in transit's future are Allegheny Ludlum, Armco Steel, Crucible Steel, and Jones and Laughlin, all active or potential participants in the Urban Transportation Development Council of the Greater Pittsburgh Chamber of Commerce. Westinghouse Electric, another member and long-term supplier of propulsion equipment, has been developing new capabilities in train control (see page 20). There are many more. Typical are Femco, a communications supplier; Gulf Oil, lubricants manufacturer; and H. K. Porter and Rockwell Manufacturing, both widely diversified organizations, each incorporating divisions with special capabilities in the railway field. ■

Union Switch

Automation of the Expo Express, the on-the-grounds transportation system for Montreal's 1967 World Exposition, will be accomplished with controls supplied by Pittsburgh-based Union Switch & Signal, a division of Westinghouse Air Brake. US&S, represented in Canada by Uniswitch, has been awarded a $1.1-million contract for the control system by Hawker Siddeley Canada, prime contractor for the 3.5-mile, double-track conventional rail line. It will extend between stub end terminals at the Expo's main gate and at the Fair site on an island in the middle of the St. Lawrence River; there will be several intermediate stops.

Described by WABCO Vice President L. E. Walkley as "an outgrowth of WABCO's continuing investments in research and development for the mass transit market," the new control system is called "a major breakthrough in modern, high-speed ground transportation." Its installation will mean that up to eight Expo trains, each of six cars, will be operating as what WABCO calls the "first fully automated, passenger carrying, mass transit system in the world."

• **WABCO's own R&D.** G. R. Schaefer, director of the Mass Transit Center, points out that WABCO itself spent more than $2 million over a 36-month period in work aimed at transit specifically. Involved are automatic train control and braking developments. While some of this R&D work was done on a test track at the US&S Pittsburgh-area plant, much more was done in cooperation with Pittsburgh Railways and the Port Authority of Allegheny County on the Castle Shannon trolley line. Final refinements were made in tests on the Chicago Transit Authority under actual service conditions. "What we produced," says Schaefer, "is an automatic train-control system which incorporates a velocity control programmer."

The basic control apparatus for Expo '67 will include a cab signal and speed control system without wayside signals or trip stops. Because this system will use low-voltage, audio-frequency track circuits, it will not require insulated joints except in terminal switching areas.

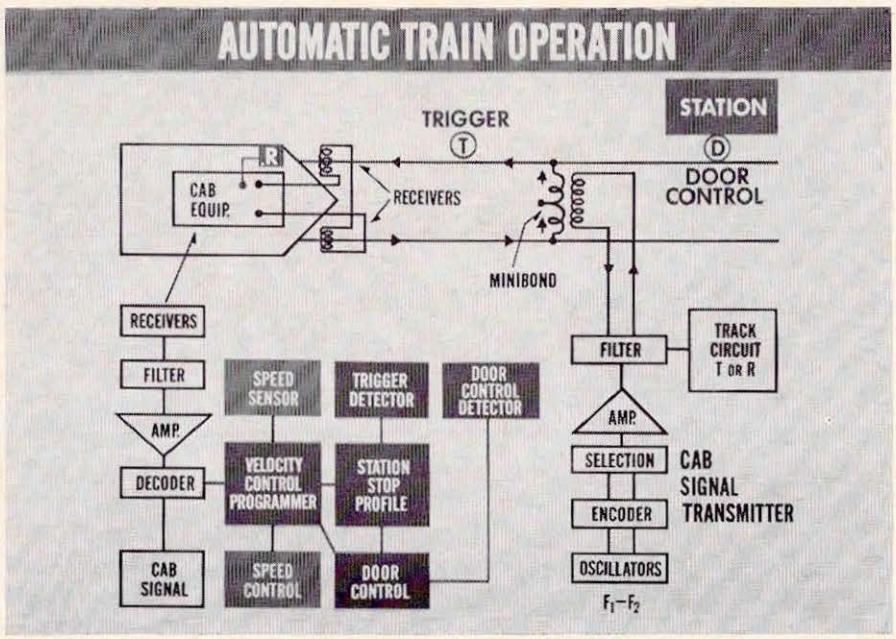
• **Control components.** Basically, the control equipment will consist of:

—A wayside block system to provide speed-distance control between trains and terminals.

—Train-borne equipment to receive and indicate control intelligence trans-

will automate Montreal's Expo '67 line

EXPO EXPRESS line will extend from Montreal gate (left) to other areas of the World's Fair on island and south bank.



CONTROL SYSTEM, US&S developed, is ready for all types of transit automation.

mitted through the rails by the wayside equipment.

—A newly designed velocity control programmer (VCP) that will augment the basic signal and control apparatus to provide automatic operation.

—A voice communication system and visual signal and speed indicator panel located within an attendant's cab.

The VCP, a servo mechanism, will automatically initiate applications of propulsion power and braking as they are called for by the cab signal and speed control system and the wayside controls. According to US&S engineers, the VCP will perform train running and stopping functions more accurately and efficiently than has ever been possible with manual controls.

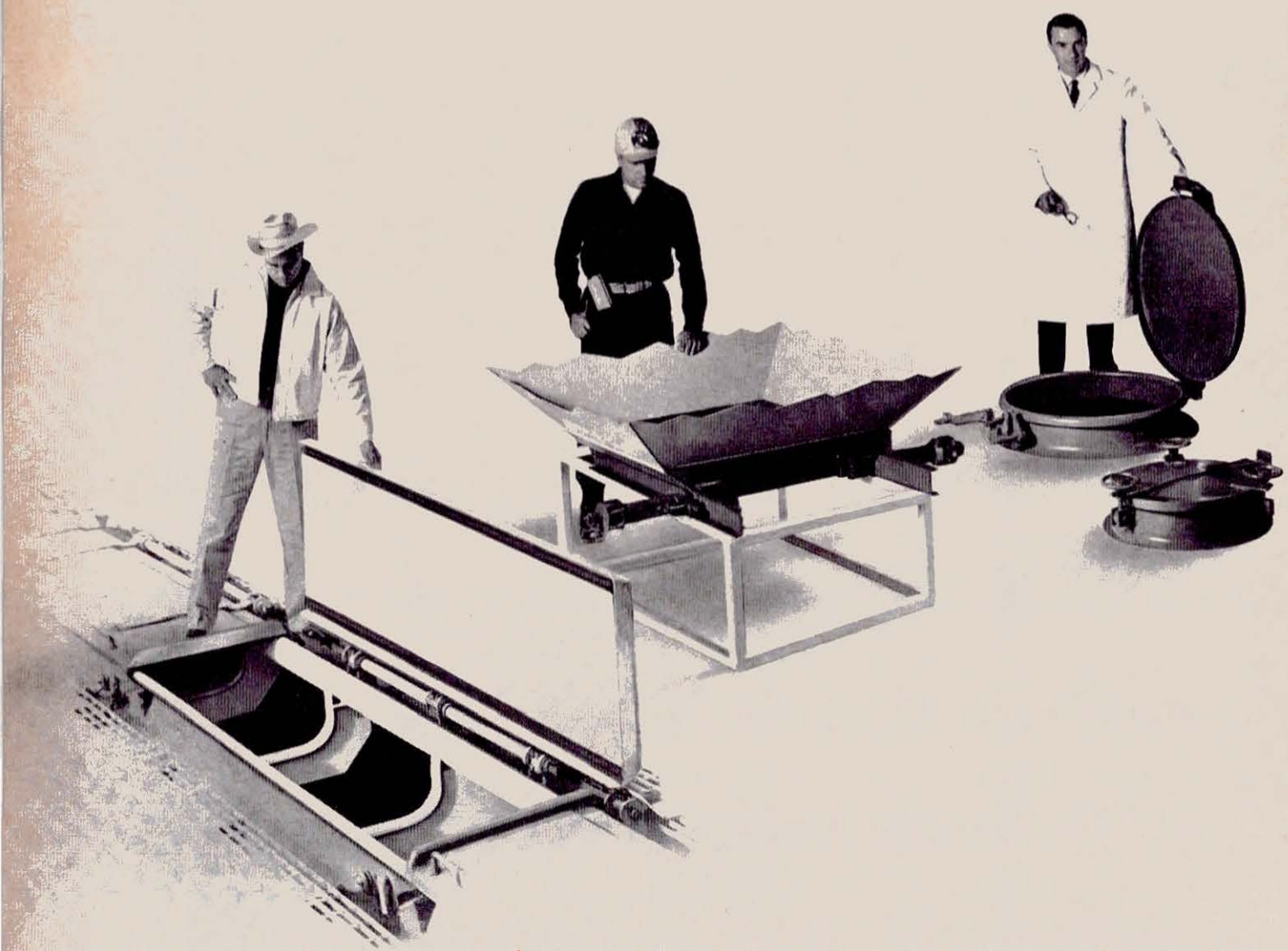
The automated operation will begin when the attendant closes the train doors and pushes a start button. The control system will then automatically conduct the train to its next station, maintaining correct speeds and distances and bringing the train to a smooth, precise stop at a preset location. Failure of any single element will result in immediate restrictions on the system to assure complete passenger safety.

● **150-second spacing.** Although the system could be further automated to operate without train personnel, each Expo Express train will carry an attendant, a fully qualified operator who can take complete manual control in the event of abnormal operations. The automatic controls will be capable of dispatching trains at 150-second intervals.

● **Operations center.** An operations control center will be set up at the entrance to the exhibition site. An illuminated map of the grounds will show the route and progress of the Expo Express trains. From this center a supervisor will monitor the entire system—including automatic dispatching, terminal interlocking, switches and crossovers—from a small control console. The master dispatcher will be able to check the complete train network and over-ride the automated systems in emergencies. He will also be in contact with train attendants, as well as station, yard and maintenance personnel, by radio, including walkie-talkies. ■

Circle 9 on reader service card ►

They need a variety



*Railroads and their shippers of agricultural, chemical and mined products.

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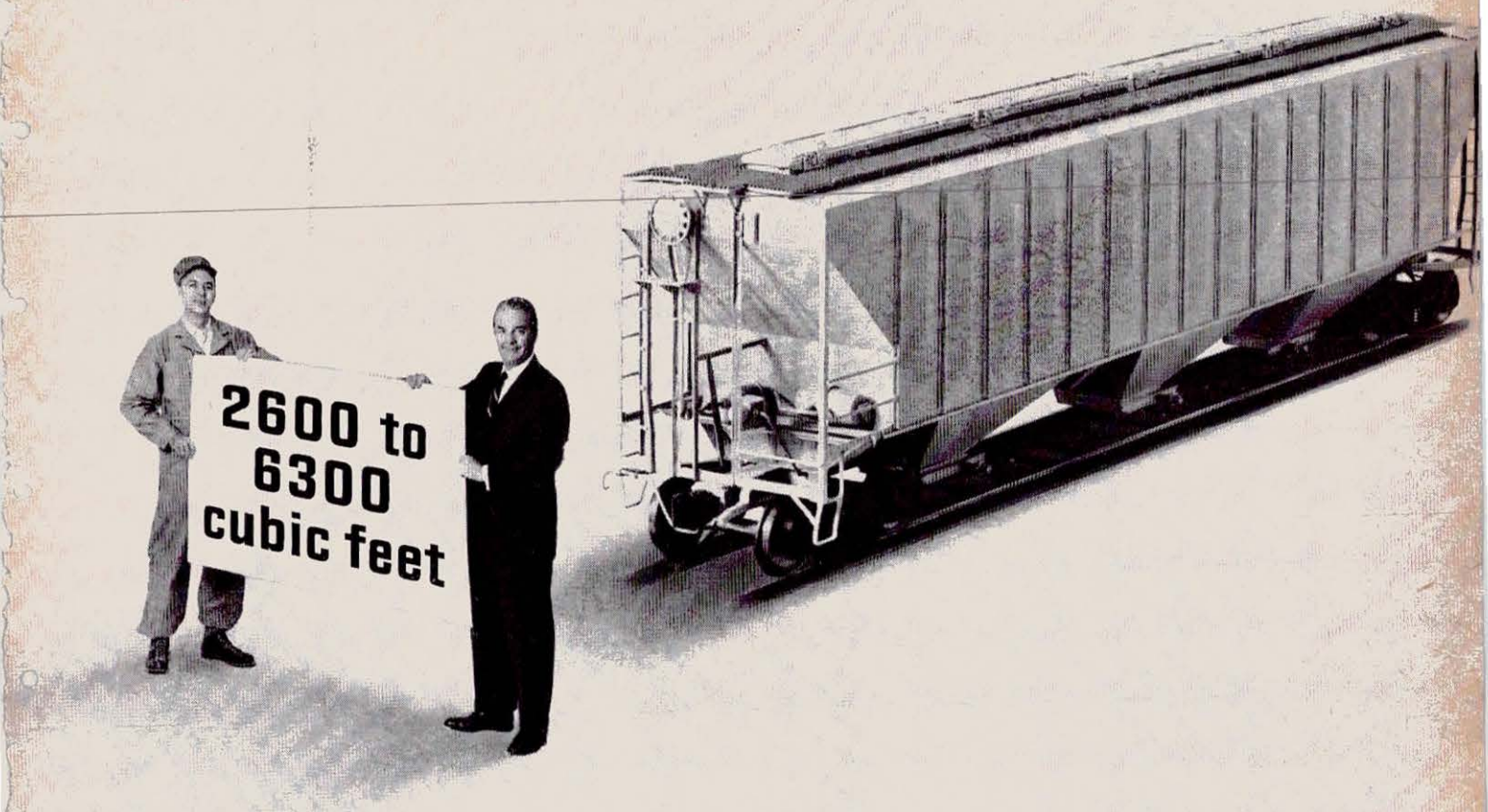

P-S covered hoppers, in the proved and practical, standard car configuration, with capacities from 2600 to 6300 cubic feet, can be equipped with a variety of options. They are available with or without center sills and you may select the types of hatches, outlets, linings or truck sizes that meet the needs of your shippers. Write or call for complete information about P-S covered hoppers, the cars that can be outfitted to handle almost any dry bulk commodity.

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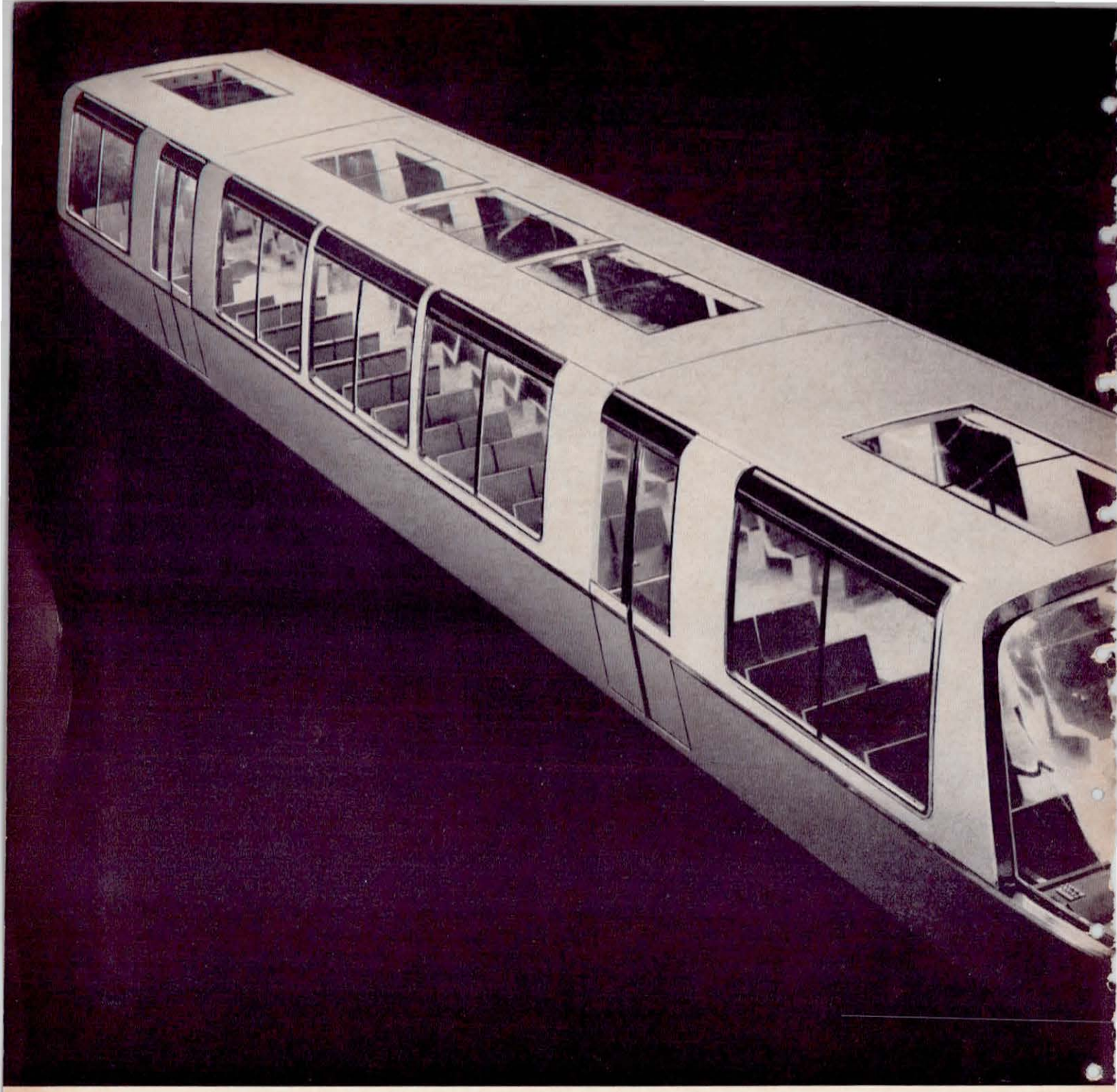


The USS Family of Steels makes the SCOT...

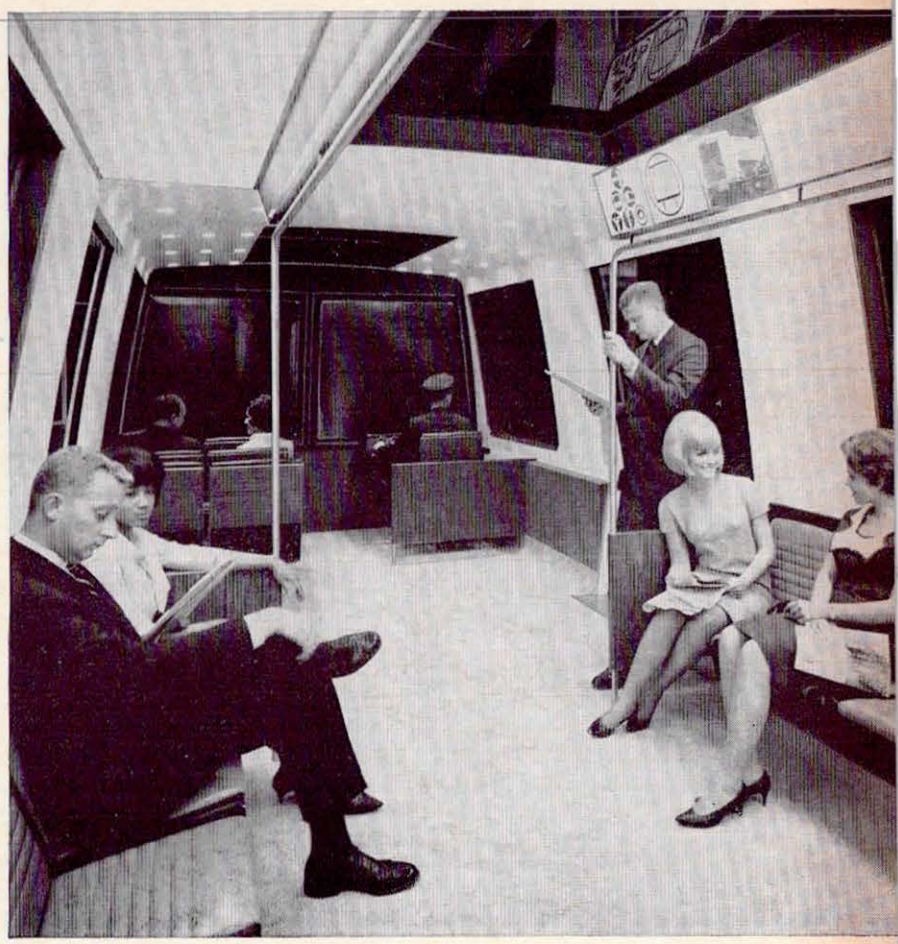
Just a few years ago, the new Scot—Steel Car of Tomorrow—would have been nothing more than a designer's wishful doodle. Today, because of stronger, more versatile steels—and new, versatile ways to use them—the Scot is not only an economical concept, but it will still be up-to-date decades from now.

Developed by United States Steel, the Scot's modular design concept permits highly efficient use of steel, provides for varying car lengths, or even conversion of the car's basic design to monorail or bus usage.

A steel sandwich panel design akin to "egg crate" construction is used as an underframe and between-doors side stiffener in the body. This eliminates much costly welding and fabrication needed for conventional designs, and helps reduce the car's weight.

USS Stainless Steel—bright, beautiful, long-lasting—is an obvious choice for the skin of the car, but corrosion-resistant USS Cor-Ten High-Strength Low-Alloy Steel is a highly regarded alternate choice. Cor-Ten steel holds paint up to twice as long as regular carbon steel. ●

Steel permits the proper design of more continuous areas into the Scot, outside and in, than would be practical with any other material. Thus, many potential stress points and dirt catchers are eliminated. Thinner, stronger steel sections throughout allow greater use of glass for greatly increased light and visibility. Single pedestal steel seats eliminate the traditional forest of supports, and allow more leg room and



Steel Car of Tomorrow

easier floor cleaning. This same efficiency also accounts for an interior that makes full use of every cubic inch of space, for maximum revenue producing area and minimum operating cost.

And since it takes about 80% of the power requirement just to move a rapid transit car, the Scot has been engineered to weigh about 850 pounds per linear foot, providing a remarkably economical horsepower-to-weight ratio.

If you're involved in transit planning, we'd like to tell you a lot more about what we learned in creating the concepts for the Scot. Call the nearest USS District Sales Office; or, for a copy of our book on mass transit, "Dilemma: People in Motion," write on your letterhead to United States Steel, Room 8599, 525 William Penn Place, Pittsburgh, Pa. 15230. USS and Cor-Ten are registered trademarks.

This mark tells you a product is made of steel.

Steel

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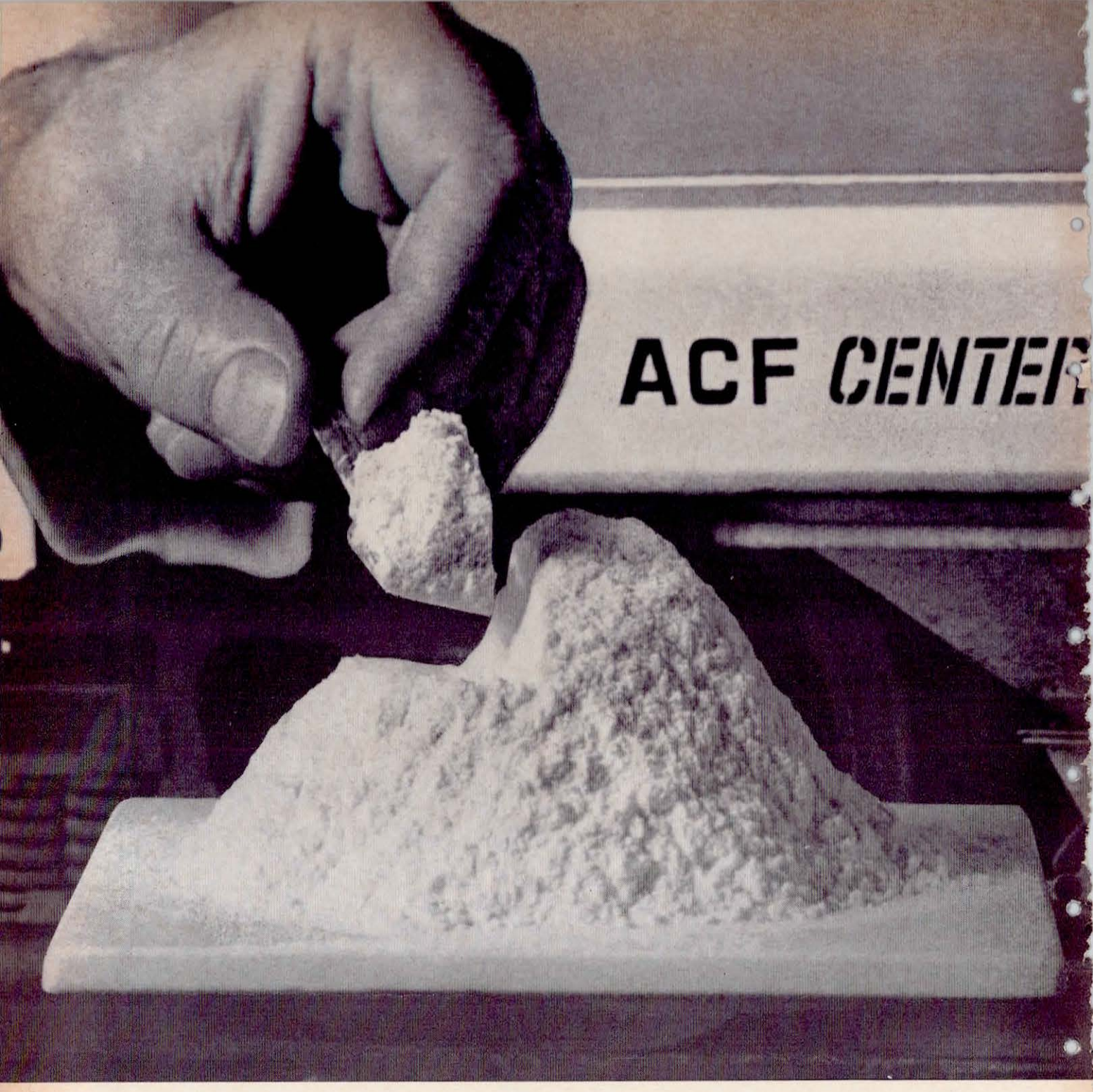

New ACF Fluidizing Outlets eliminate the cost of

ACF fluidizing outlets on Center Flow™ cars can markedly increase your profit potential in the bulk powder market.

The new ACF fluidizing outlets are fully compatible with existing receiver facilities. They expedite unloading by introducing air into the lading to make it "flow" like a liquid. They provide sanitary handling, maximum efficiency of discharge.

Just as important, you get all the other versatile advantages of Center Flow cars for bulk powder handling: high capacity, clean bore design, reduced maintenance, easier cleaning.

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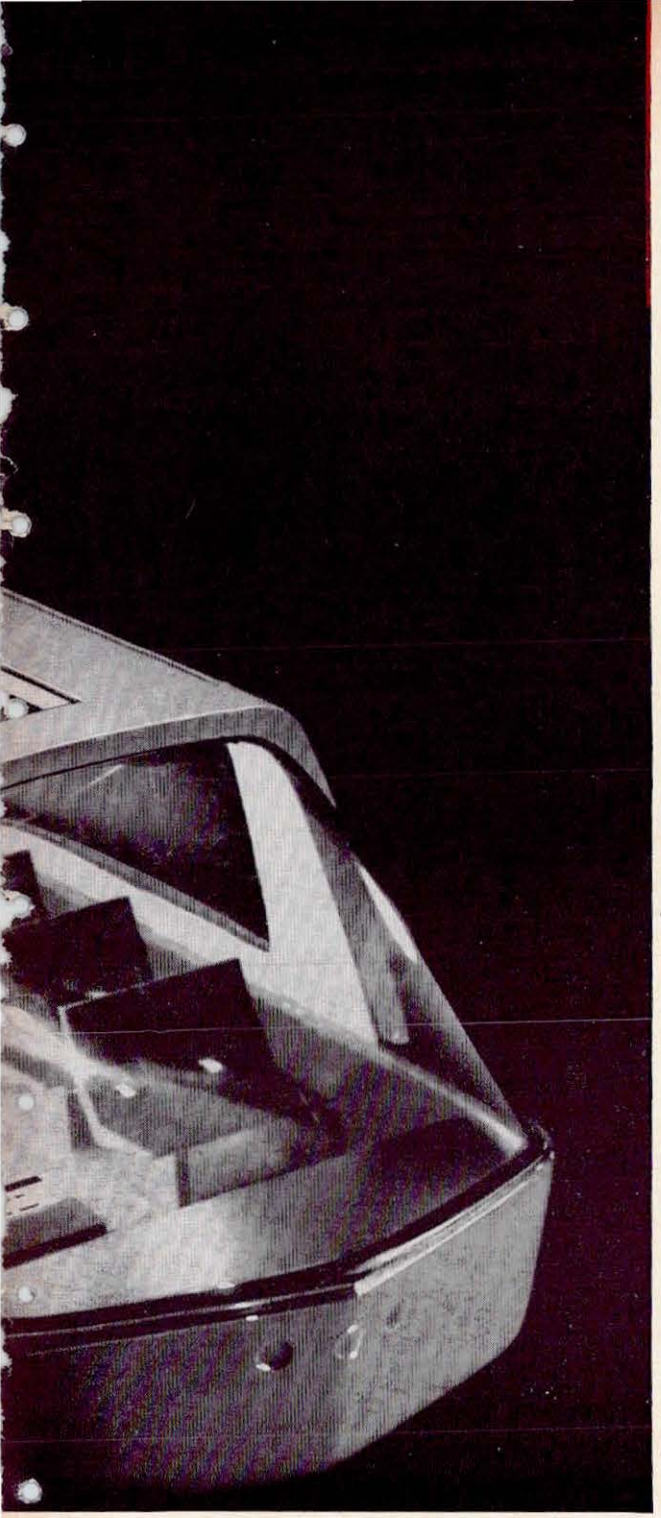

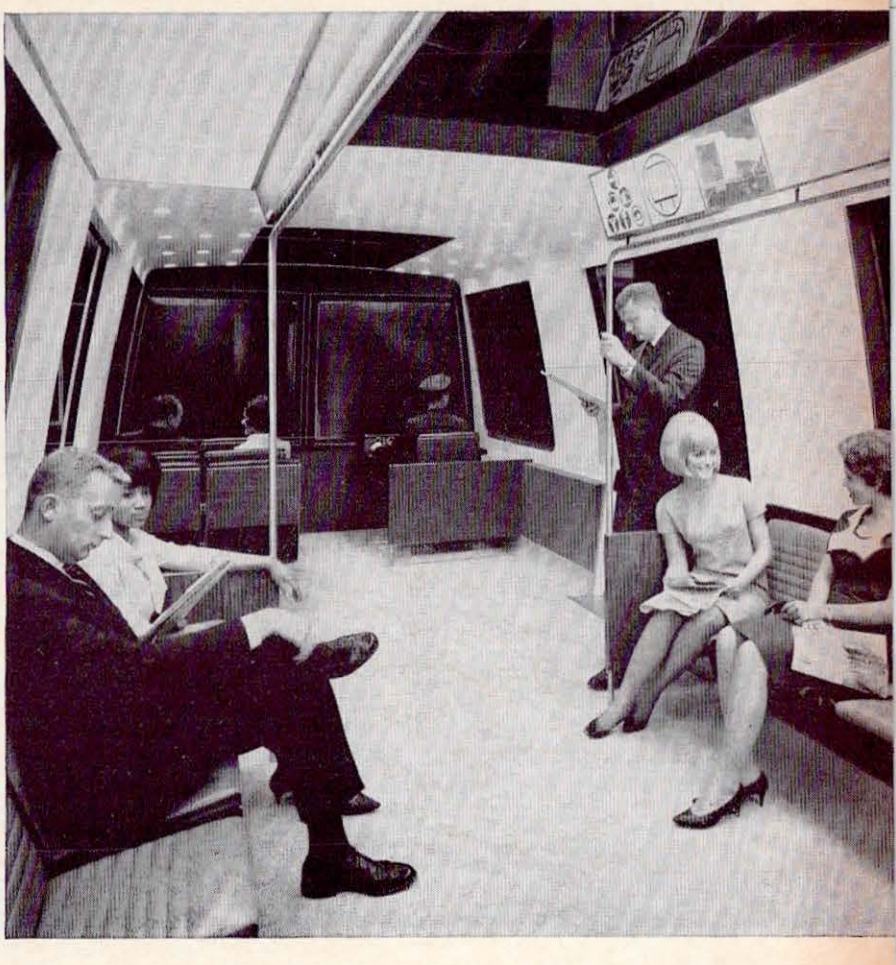

Steel Car of Tomorrow

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Steel

USS United States Steel: where the big idea is innovation

A microwave link by space creatures?

Henry Magnuski, Motorola's internationally recognized leader in microwave research, ponders the possibility that intelligent creatures in outer space, a thousand or so years ago, may have sent Earth some mysterious microwave signals. But he doesn't let it stop him from making a strong pitch on Motorola's microwave systems for the railway industry.

Recently, a segment of the scientific community has been knee-deep in confusion, if not in controversy, about CTA-21 and CTA-102. Those are the mysterious points in outer space which emit very strong and short microwave signals.

As of publication time, no one knows exactly what is causing these signals... but a lot of people have strong opinions. Some say planets; some say they are gaseous disturbances like other "radio" stars; some say they were sent by space-creatures of a super intelligence!

Don't laugh. Some well-respected astronomers take the "super-intelligence" theory quite seriously (but don't take that medieval "monster" I'm pictured with seriously). The Russians even laid claim to detecting an "intelligent" 100-day pattern to the signals. In my opinion they laid an egg and most British and American astronomers agree.

So, the controversy rages. Although I accept only the "gaseous disturbance" theory, I'll never be able to prove it, unfortunately. Why not? It's simply a matter of time and distance. Best estimates put CTA-21 and CTA-102 about 1,000 light-years away, so the microwaves our radio telescopes are picking up now were sent around 1,000 years ago. Thus, even if we could answer these signals today (and Earth doesn't have the power or technology yet), it would take another thousand years for our answers to arrive at the CTA's; and who is to say the "senders" will still be there?

Even if they did read us, it would take still another thousand years for any "intelligence" to answer us ... unless microwaves can be made to travel faster than the speed of light. Who has the time to wait? And another thing—if these creatures are so blasted intelligent, why didn't they send us a more readily decipherable signal in the first place?

Maybe I'm skeptical simply because I don't like the idea of anyone being a thousand years ahead of Earth's technology. For now, however, let's concern ourselves with the day-to-day business of running a railroad ... a considerable challenge in itself ... but one to which Motorola microwave equipment is contributing mightily these days.

1660 MILES – 55 MICROWAVE SITES

Take, for example, the system we recently designed and installed for the Conestoga Company's communications and operational network serving, among others, the Kansas City Southern Lines. It's a fully-integrated system equipped with microwave and VHF radio to provide data transmission, teletype, centralized traffic control, dispatching, and telephone communications. Backbone of that part of the network serving the railroad is a 1660-mile, 55-site microwave system radiating from headquarters in Shreveport to general offices in Kansas City, Mo., and to terminals in Dallas, Port Arthur, and New Orleans.

Among the many functions this complex system performs are:

- Interconnection between IBM 1050 machines at 17 wayside microwave stations and IBM equipment in Kansas City and Shreveport. This data transmission network consists of 4 party-line circuits that extend the full length of the microwave system.

Motorola serves over 50% of the microwave needs of America's vast railroad network.

MR-50A solid state RF microwave equipment with the longest customer-proven reliability history in the railroad industry.

- A Centralized Traffic Control network (CTC) for controlling 33 passing tracks from the CTC control boards in Shreveport. Additionally, track-side CTC sites have intercom access to the main boards for maintenance crew and engine crew communications.
- A VHF dispatching network covering 72 wayside base stations.
- A telephone network that terminates in Shreveport, providing complete dial facilities between all stations in the system.

AND YET ANOTHER

For Atcheson, Topeka & Santa Fe Railway, Motorola designed and installed a 15-station microwave and multiplex system at the west end of the railroad's Los Angeles-to-Chicago line extending from Los Angeles, California to Winslow, Arizona. Later Motorola added 24 stations between Amarillo and Topeka. This system incorporates a unique filtering plan to meet circuit drops and to conserve the baseband spectrum.

NO APOLOGIES

Trying to communicate with space creatures may be a bit more glamorous than signaling a dispatcher in Winslow, but you'll hear no apologies from Motorola for putting R&D bucks on the line, so to speak. Maybe we just don't want to wait a few thousand years for the payoff.

MOTOROLA

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1. **Microwave Solutions To Communications Problems,** new, more economical approaches to today's complex railway communications problems with an eye to future needs, and 2. **Advanced Microwave Science & Systems,** military and space applications beyond the boundaries of classic design patterns. Both these brochures are yours if you'll attach this coupon to your letterhead and mail it to me.

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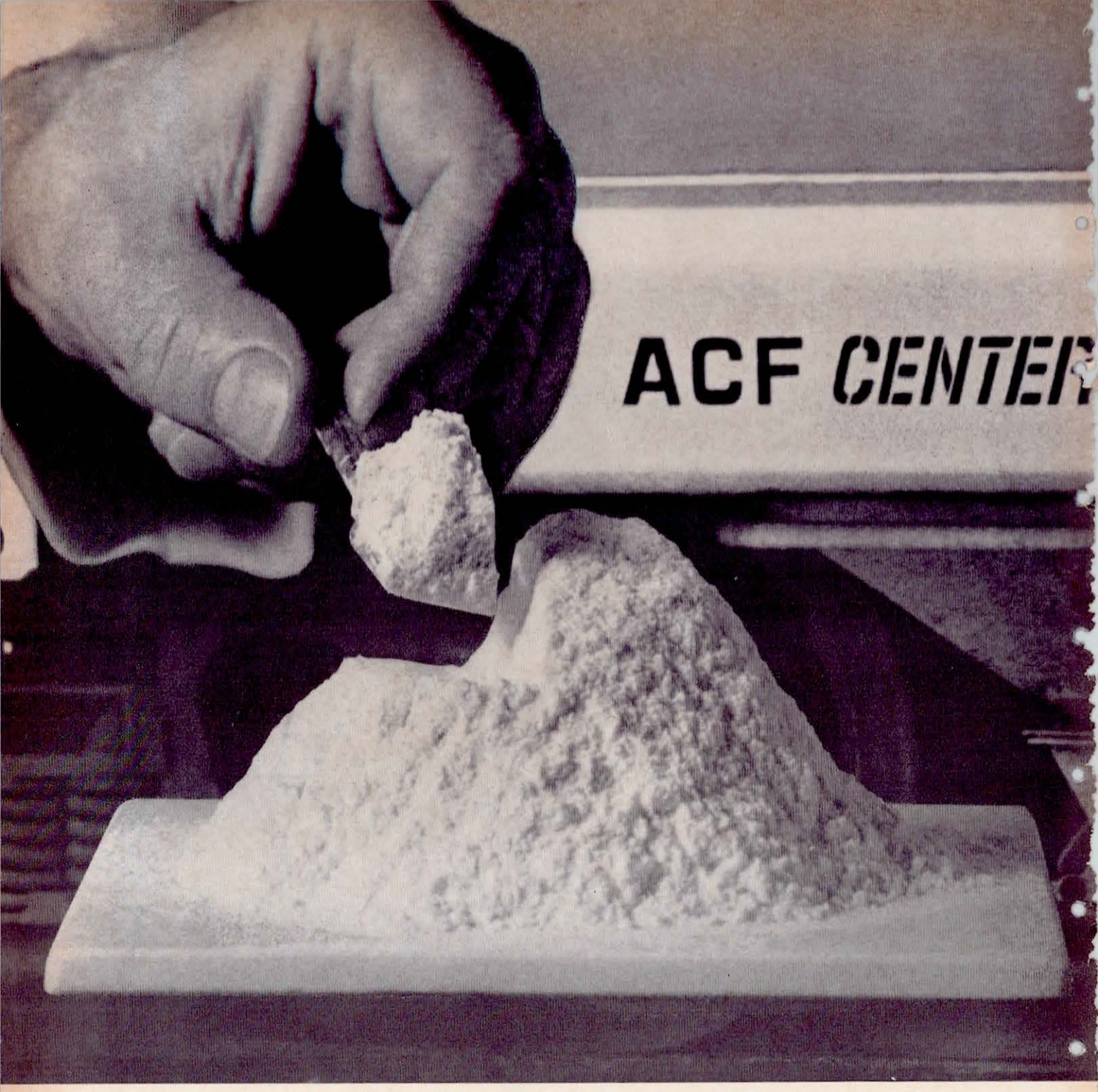

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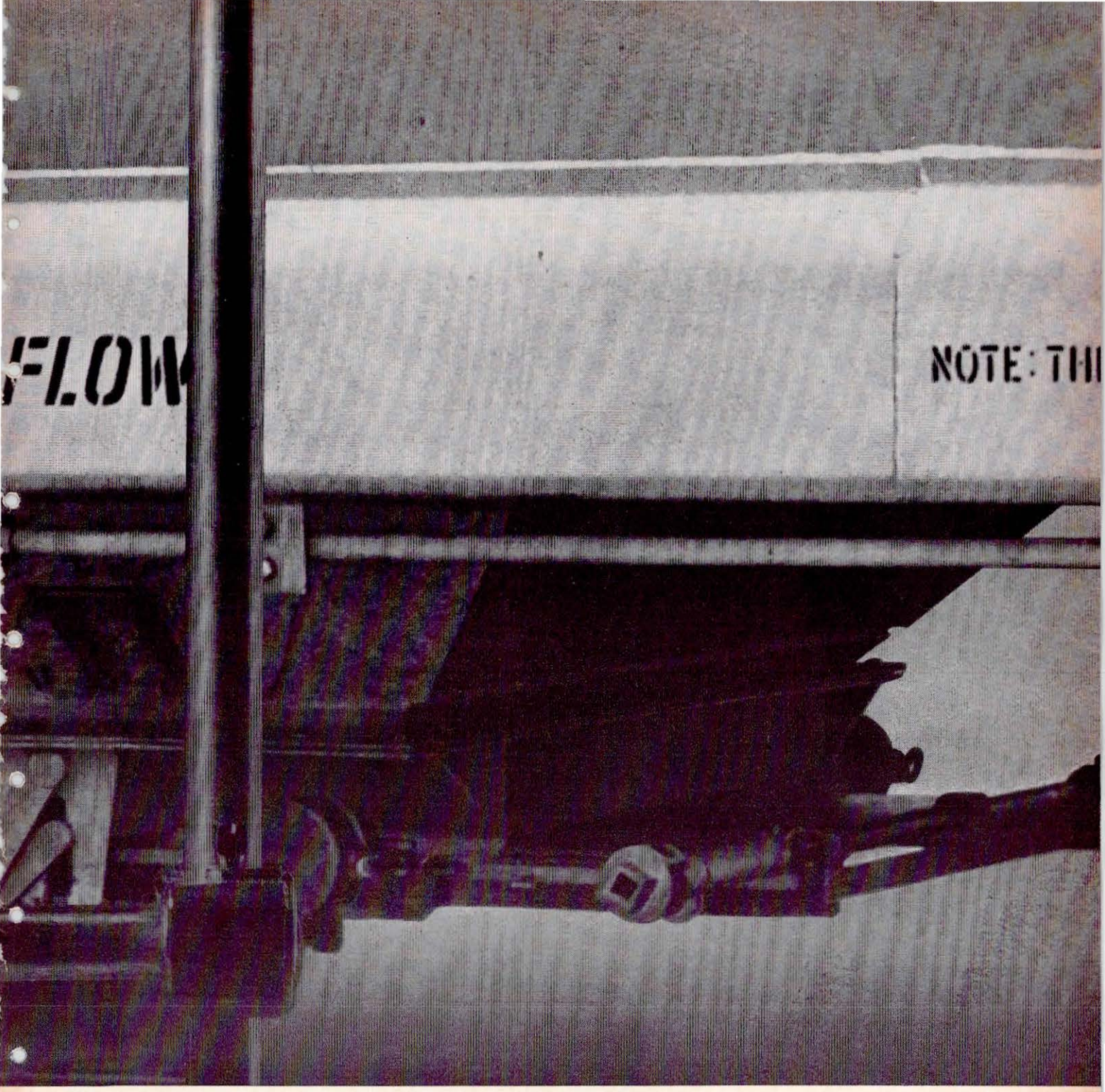


specialized cars for unloading compacted powders

Investigate the savings you can make by using Center Flow cars with new ACF fluidizing outlets in your bulk powder market. Write to American Car & Foundry Division, ACF Industries, Incorporated, 110 Clark Street, St. Charles, Missouri 63301, or our sales offices in Chicago, Philadelphia, St. Louis, San Francisco, Washington, D.C.

acf **ACF INDUSTRIES**

NEW PRODUCTS REPORT

Desktop Computer (RA-1)

PROGRAMMA 101 is a desktop computer which has the four computer fundamentals: It can run programs calling for a long series of arithmetical operations; it can store or "remember" these programs internally as well as externally; it can make logical decisions by itself; and it can print clearly identifiable results.

The computer, about as large as a standard typewriter, sells for $3,200.

With the PROGRAMMA 101, a businessman, or engineer, need not rent time on a large-scale computer, or rely upon a highly trained computer specialist to run his program.

One of the computer's significant features is its method of storing programs, each of which can call for as many as 120 instructions. The programs are stored on magnetic cards, which are recorded on the PROGRAMMA 101 itself. Thus, an operator, after inserting a program card, need only enter the variables of a particular program; the program then governs the operations that are required for solving the problem. *Olivetti Underwood Corp.*

Talkback Speaker (RA-5)

The yard talk-back speaker, model YS 142-P, has a solid-state, receive-send amplifier and operates by push-switch, to signal the console. It has on-off and send-receive relays remotely controlled from the console.

The unit is powered by two lantern batteries, and can be mounted on a 3-inch pipe mast. *Electronic Communication Equipment division of Western Industries.*

Translator (RA-2)

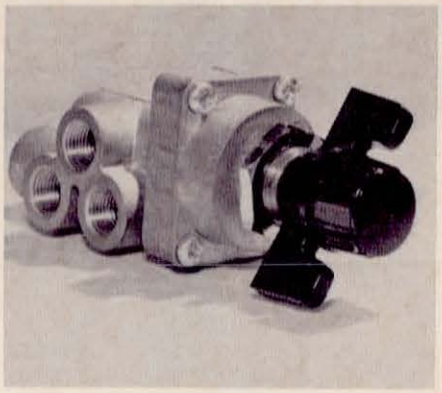
The T-585 is machine-language translator and editor which makes it possible to send punched card information over conventional teletypewriter equipment and circuits. As it translates from IBM language to telegraph language, the T-585 simultaneously edits the transmission, controlling the content and format of the outgoing message stream.

After editing the input punched data through plug board wiring, the T-585 translates the information to 5-level telegraph code signals. The signals are fed through a second connector cable to a model 28 teletypewriter which sends the signals over the telegraph line. The system also provides local print-out of the transmitted message.

Telepunch sends card data at the top speed of the teletypewriter system to which it is connected: 60, 75, or 100 wpm. An IBM card punch, capable of reading at the rate of 200 wpm (20 characters per second) is paced to the maximum speed of wire transmission by the T-585. *Systematics Division of General Instrument Corp.*

Car Glass (RA-4)

Herculite heat-tempered glass having "four to five times as much impact resistance as ordinary glass of the same thickness" is available for transit cars. Graylite 56, a neutral gray tinted glass, is recommended for side windows. Graylite 14 curved-glass roof sections transmit 14% of visible daylight and control objectionable overhead light intensity. Both are coated outside with a light- and heat-reflecting transparent metal oxide film. *Pittsburgh Plate Glass.*



Windshield Wiper Valve (RA-3)

The Model GF-192 Air Push windshield wiper control valve is said to provide full adjustment through entire controlled speed range without loss of torque because the valve is piped to the exhaust of the wiper motor. The valve is primarily adapted to Air-Push Challenger and Super Challenger air-operated windshield wiper motors. It has a zinc die cast body and a large plastic control knob for driver convenience. Price is comparable to that of previous control valves. *Sprague Devices, Inc.*

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RAILROADING AFTER HOURS WITH JIM LYNE

LYNE

MEXICAN BORDER BILINGUALISM—Speaking of railroading in two languages—French and English—it was reported here, Oct. 4, that the Roberval & Saguenay prints its operating rules and timetables in both languages. The question was raised whether there is any of this railroad bilingualism—Spanish and English—along the Mexican border.

E. A. Lewis, assistant to president, Arcade & Attica, at Arcade, N.Y., says he has a 1952 operating timetable of the Ferrocarril Inter-California (then a subsidiary of the SP), and that this timetable is printed in both Spanish and English. It has the same general format of SP operating timetables of that date.

W. E. Barker, superintendent, San Diego & Arizona Eastern, tells me his road's trains use the Tijuana & Tecate Railway's tracks for 36 miles in Mexico—en route from El Centro, Calif., to San Diego. The SD&AE trains are the only trains using this trackage, and they are manned by U.S. crews. Operations are carried on in English—but the telegraph with Morse code is used for communications, since "there is no language barrier in transmitting or receiving Morse."

WHO'S AN EXPERT?—A reader in Santa Barbara has written us a rather indignant letter because in our Oct. 4 issue, p. 16, we referred to several governmental people as passenger transportation "experts"—e.g., such people as Dr. Robert Nelson of the Commerce Department and Senator Claiborne Pell. Our critic believes such governmental people's knowledge of transportation (at least, the railroad part of it) is rather limited.

These gents, so far as I've seen, have not set themselves up as railroad experts, but are seeking to get railroad tranportation into proper focus as a part of the answer to urban transportation problems. Up until quite recently most governmental authorities all but ignored the existence of railroads—and seemed to think that the whole transportation job could be done by highways, waterways and airlines. I'd say that the interest such governmental people as Highway Commissioner Dwight Palmer of New Jersey, New York's Dr. William Ronan, Senator Pell, and President Johnson have shown in the contribution that railroads can make to solve pressing urban transportation problems—is all to the good.

And, by the way, the October issue of Science & Technology magazine (thanks to G. R. Holt, Jr., of Pine Bluff, Ark., for the advice) publishes some original information on possible closer integration between transport modes (the "interfaces"). A fellow traveling 500 mph by air to a city within 250 miles, actually made a door-to-door speed of only 25 mph.

STEEL 'PIKE' VS. SUPERHIGHWAYS—I was especially interested in an advertisement (RA, Oct. 18, p. 14) by Bethlehem Steel in which two striking color-pictures of freight trains appeared, with the arresting caption: "This single-lane steel 'pike' does the job of several superhighways."

That is the simple technology and economics of the railroads' situation. But if railroad service is that efficient, technologically and economically, then why aren't all the railroads jammed with traffic—and proportionally prosperous?

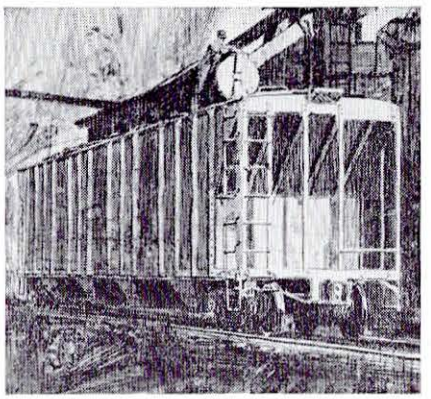
The answer to that question is, of course, that railroad traffic has to supply and maintain its own tracks (and pay taxes on them), while trucks do so only in part and barges not at all. The railroads are holding their proportion of the country's freight transportation, but the ratio would be much higher if all modes were treated equally. Such ads as Bethlehem Steel's help get the word around.

We've all seen trucks lettered: "This truck paid $x (usually 2 or 3 thousand) in taxes"—which are, mostly, not taxes at all, but fees for road use. Advertisements like Bethlehem's serve to shed light on comparative transport economics.

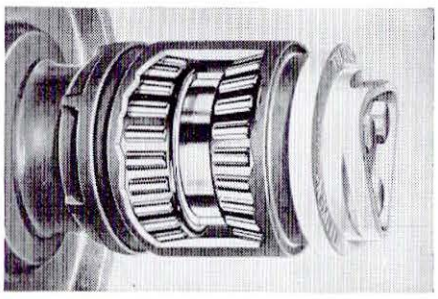
RI HOSPITALITY—A few weeks ago, Rock Island's No. 22 (Tucumcari to Memphis) was hours late because of floods. Food service on this train is regularly provided by making meal stops, or providing box lunches. The schedule was upset and some of the passengers were, naturally, annoyed.

The situation was handled by General Manager Buffalo, who was aboard the train in his business car. He solved the problem by inviting the passengers in relays (children first) to have a meal with him in the business car—and for free. The annoyance of the passengers quickly vanished, and the railroad quickly acquired some warm friends.

FYI



For your information: the trend to "Roller Freight" (freight cars on roller bearings) continues to pick up speed, with over 200,000 cars now using this better system. Leading the trend is the Timken® "AP" bearing, the precision-made *tapered* roller bearing. On a per-mile basis, this is the soundest, most economical journal bearing available. 161 railroads and private car lines use this bearing. Pictured here is a modern covered hopper, typical of thousands now in service or on order on Timken bearings. The Timken Roller Bearing Company, Canton, Ohio.



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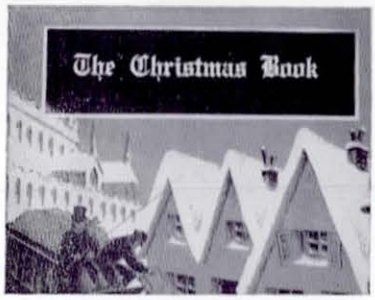

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Here's the perfect book for Christmas giving . . . with something for everyone to double the glow and happiness of the Christmas season. It's really four big books in one . . . a treasury of stories and poetry . . . a song book of many beloved Christmas Carols . . . a holiday decorator's guide . . . and a cookbook with page after page of Christmas confection recipes. The 128 big, profusely illustrated pages include:

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Christmas Carols:

Words and music, each on a separate page, of such beloved Christmas Carols as **Hark! The Herald Angels Sing, The First Noel, Silent Night, Oh Come All Ye Faithful, It Came Upon A Midnight Clear,** and many others.

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'More traffic will call for more cars'

NASAB delegates ask for long-range building plans to keep pace with national growth; are optimistic on LCL, pessimistic on L&D.

"To meet the needs of an ever-expanding economy, railroads must come up with some long-range car-building plans, and begin immediately to increase their net freight car family."

That statement, by D. L. Koerber, was one of the highlights of the 29th annual meeting of the National Association of Shippers Advisory Boards, held at Los Angeles Oct. 18-20. Sharing the spotlight with it were an encouraging report on a possible "rebirth" of railway less-carload freight service; a discouraging review of the freight-claim situation; and discussions of such other topics of shipper interest as clean cars, transportation legislation, and railroad programs for improvement of car supply and operating efficiency.

● **More cars for more traffic.** Koerber, speaking as first vice president of NASAB, and chairman of its shipper car efficiency group, pointed out that growth of the national economy is predicted to result "in a doubling of GNP constant dollars in the next 20 years, and to a doubling of freight traffic. Railroads have pretty well checked the diversion of traffic to other modes, so it seems a reasonably safe assumption that in a short 20 years from now there will be twice as much rail tonnage."

He conceded that size and ton-mile output of individual cars have increased sharply. But, "as of Sept. 1, the serviceable fleet had dropped to the all-time low of 1,402,904 cars. Only recently was the downward spiral in total capacity arrested. The bad-order situation, now 5.8%, is a far cry from the 4% goal set by this association."

● **Government, or private, action?** The Interstate Commerce Commission, Koerber reminded his shipper-railroad audience, "is presently engaged in a far-reaching investigation of the adequacy of car supply [Ex Parte 241]. This case raises a fundamental issue which each of us should squarely face up to—whether or not the ICC should determine for each carrier the quantity and type of equipment it should buy, or retire.

"A few years ago we would have been shocked even to entertain such a thought. But times have changed and today we find leading national shippers, apparently so disheartened with the unwillingness of the railroads to settle their own differences, that they are ready to advocate government intervention.

"The only glimmer of hope I can see for true private management in the area of freight cars—if the railroads honestly want it—is for the railroads as a whole (as some individual lines have been doing) to boldly and dramatically and immediately upgrade their car fleet to more adequately meet today's needs, and to develop and maintain a sustained program of car building that will result in net gains at least equal to the 4% estimated annual growth in our mushrooming economy.

"You can do this if you choose to. You can also elect to do nothing, to fiddle away precious time until a third party moves in. Pursuit either of the status quo, or of radical regulatory change, amounts to just such an election."

● **How railroads vote.** That the railroad vote in that "election" is likely to be positively cast for more cars was brought out by Daniel P. Loomis and R. R. Manion, president and vice president (Operations and Maintenance Department), of the AAR.

Loomis, whose luncheon address was reported in last week's Railway Age (p. 11) agreed with the predicted increase in the national economy and the probable accompanying growth in rail traffic. He reviewed the "giant steps" the industry is taking toward a "new age of railroading" with its record 1965 capital expenditures. And he assured NASAB delegates that the railroads would be willing to spend even more money on capital improvements if the necessary funds become available through any combination of added traffic, lowered costs and "a cooperative attitude on the part of union leaders and government."

Manion, too, stressed the prediction that rail freight traffic is likely to double, or more, in the next two decades. "There is still much to be done if our industry is not only to keep abreast of today's requirements, but, more importantly, to plan ahead for the growing needs.

Dwight L. Koerber

"We must meet the demand for fast, low-cost, high-volume transportation. The demands of the next several decades will call for railroad men and shippers alike to project their thinking on a new level of creativity embracing new approaches and ideas, and to cooperatively develop true efficiency in the utilization of equipment and plant."

E. Paul Miller, chairman of the AAR's Car Service Division, pointed out that one field in which railroads and shippers can cooperate toward such efficiency is to work together to increase the effective supply of freight cars. Railways must pull and dispatch cars on schedule, move them expeditiously, spot them quickly and make them available for reloading without delay. Shippers can help through prompt and clean unloading, prompt billing, and careful use and proper replacement of components in cars specially equipped with damage-prevention devices.

● **Let railroads decide.** Both railroads and the CSD may be "in better position than at any time in the past to take affirmative and immediate strides" to improve car supply and car utilization as a result of information which may be developed by the Ex Parte 241 investigation, Koerber said in a second statement. "But common fairness demands that railroads be accorded reasonable opportunity to do just that, prior to and independent of, government intervention."

This statement, to be filed with the ICC on or before the original closing date of November 1, puts NASAB on record as requesting the Commission to: "(A) Publicize facts and information pertaining to freight car utilization; (B) admonish carriers to effect improvements where necessary; (C) examine effectiveness of present Car Service rules and distribution orders, including means of communicating instructions to individual employees; (D) where communication of car service matters is not effective, indicate action required and feasible to maximize acceptance of responsibility by individual railroads and shippers; and (E) hold the record open beyond service of report to accord railroads a reasonable opportunity to correct apparent deficiencies in supply or service before issuance of final order."

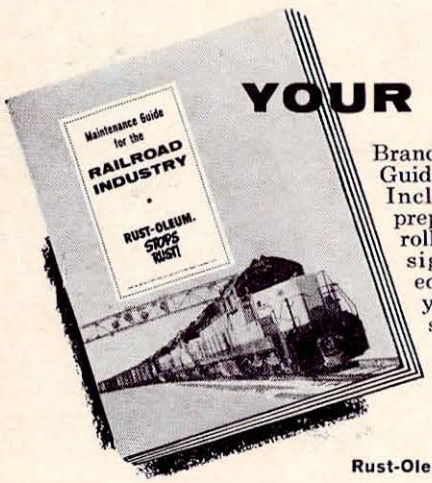
● **Rebirth of LCL?** That LCL service by rail may be on the point of reversing its long downtrend was the burden of optimistic statements by both shipper and carrier representatives at Los Angeles.

"Shippers are just waiting to give LCL back to the railroads, because truck rates have gotten so high—but we must have service to do that," said P. W. Gosling, Minneapolis regional traffic manager of F. W. Woolworth, and chairman of NASAB's Shipper LCL Committee. "There's a big world ahead in package freight, if we just get over the defeatist attitude concerning it," agreed R. W. Buck.

Their remarks were echoed by such railroaders as G. J. Morley, traffic manager—sales, of the Soo Line at Minneapolis; by H. R. Shelley, traffic manager — merchandise-forwarder sales, Missouri Pacific-Texas & Pacific; and by the Santa Fe's Pueblo, Colo., agent, C. R. Griffin. The Soo, said Morley, "considers LCL profitable on an avoidable cost basis; sees no reason to change its present policy of encouraging and promoting the traffic, and of handling it in a manner that will attract more." On the MoPac, according to Shelley, "interest in LCL is high, optimism keen. We believe the future is bright for carriers willing to administer to present ills." MP, he added, is using TOFC, and modernizing key terminals, with the double objective of cutting LCL costs and attracting tonnage.

A resolution proposed by the committee, and approved, recommended that advisory board members "support the railroads that are still handling LCL by giving them not only increased LCL tonnage, but rewarding them with increased carload and piggyback tonnage as an incentive to them to maintain a complete transportation service to the public." Underlying this recommendation were clauses recognizing and commending "the great efforts some railroads are making in handling LCL," pointing out the "the continued need for such service," and stressing its importance as a means of maintaining competition.

● **Damage and dirt.** If LCL reports were optimistic, that on loss and damage was not, nor was that on clean cars. The L&D report, made by R. C. Dallow, TM, National Distillers Co., New York, and chairman of NASAB's National Freight Loss & Damage Prevention Committee, indicated a probable claim bill of close to $150 million



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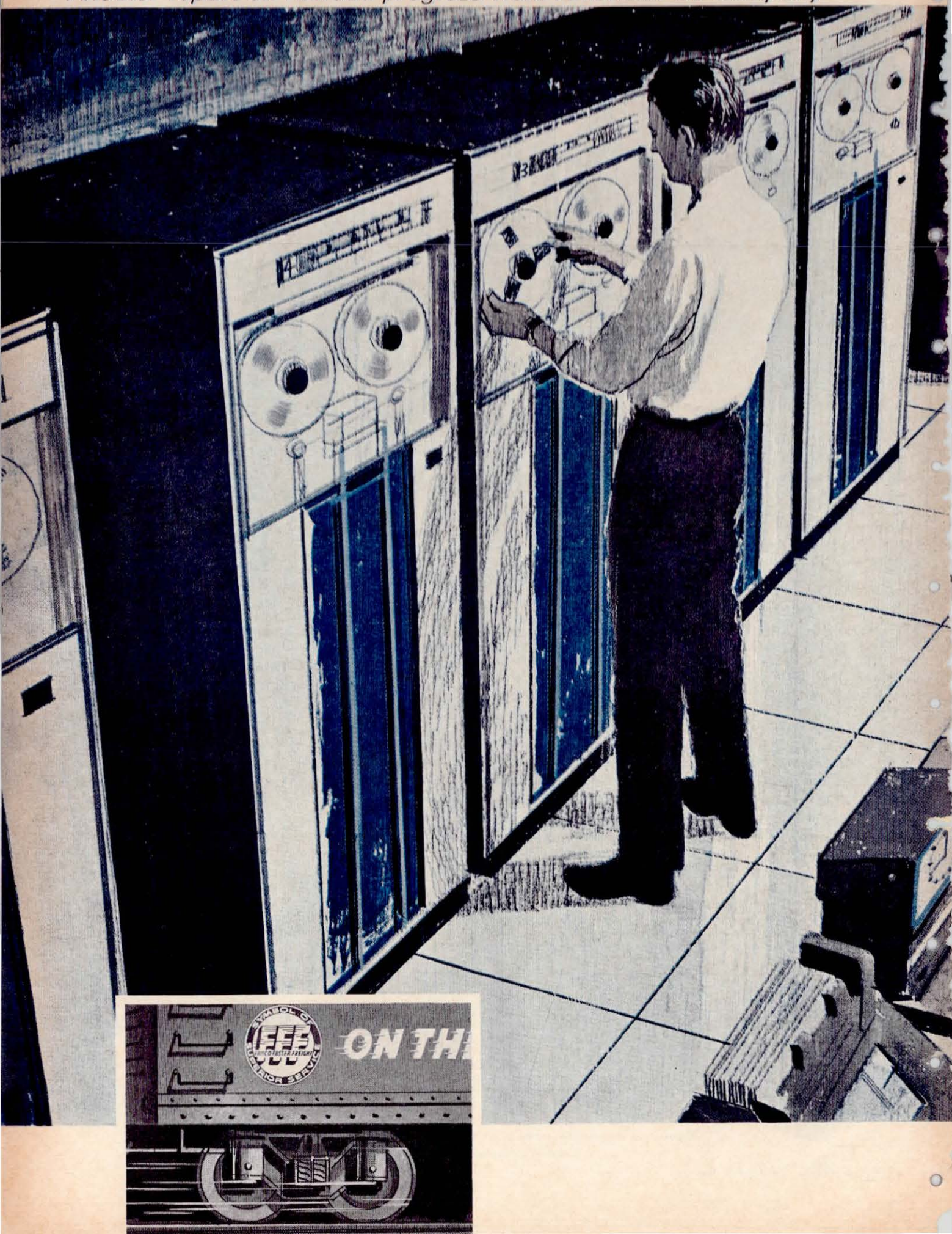
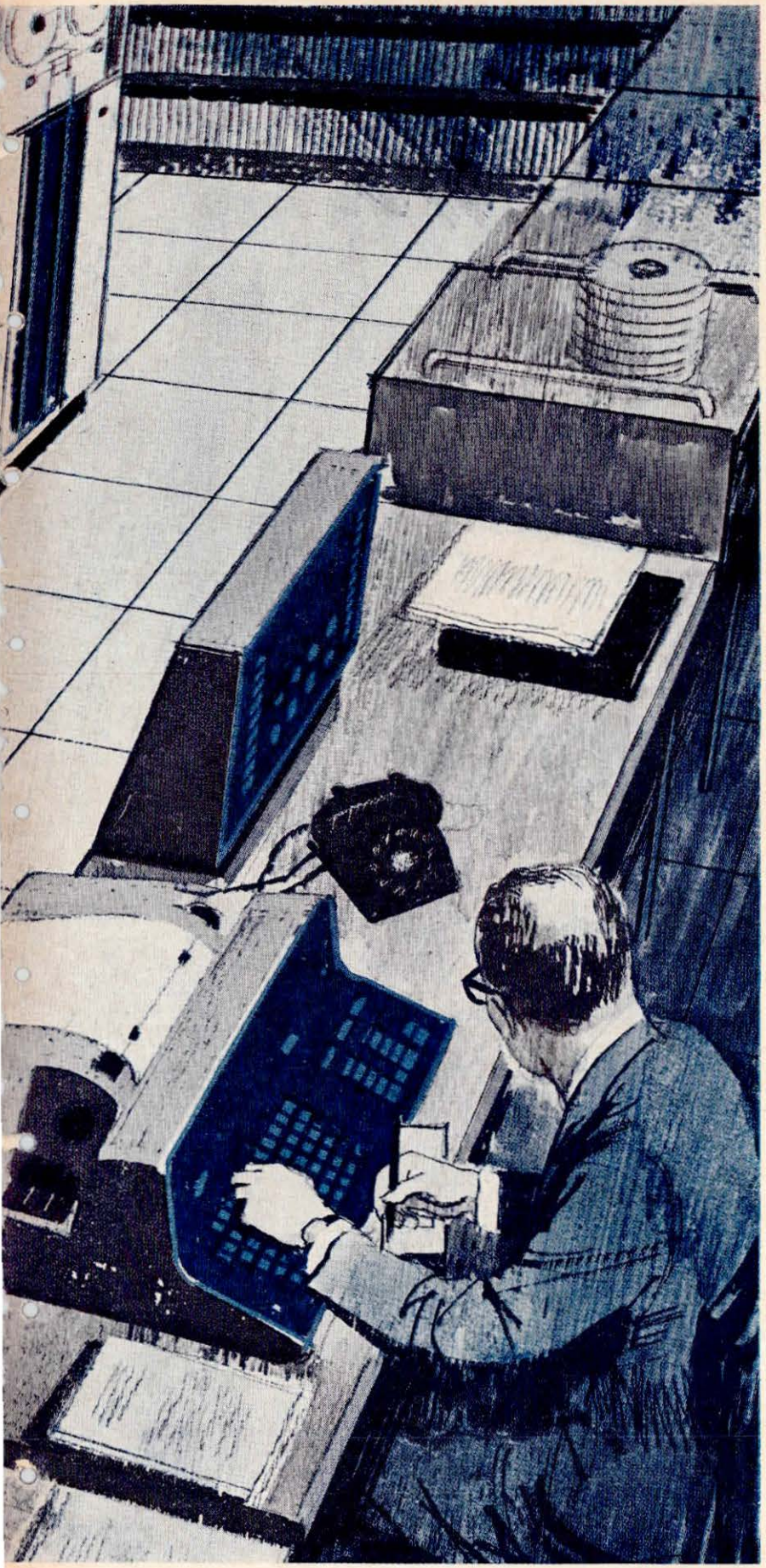
Another report on railroad progress from American Oil Company



QUALITY CONTROL FOR RAILROADS– A FRISCO FIRST!



On many railroads today, computers are used to improve train performance. But Frisco claims an important first in the use of data processing to control not only train performance, but overall car performance, as well.

Frisco's quality control group, called the Service Evaluation and Planning Department, has scrapped the traditional train arrival and departure report as a measurement of railroad service. Instead, they get a detailed report on *every car,* from the time Frisco receives it until it leaves Frisco's possession.

This information is fed from six major terminals by teletype to Frisco's computer center in Springfield, Missouri. Delays are quickly detected, corrected and studied to prevent a recurrence. Any car record indicating above-average service is also examined for clues that will lead to overall improvement.

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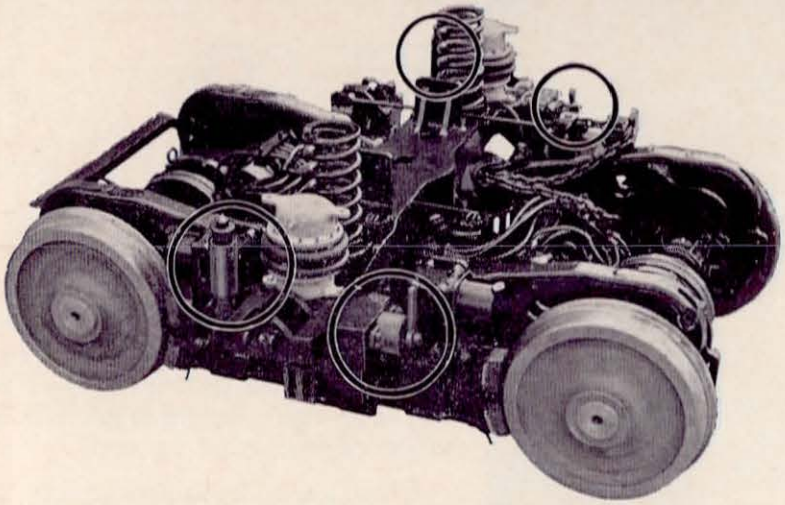

Modern lightweight rapid transit trucks...like this General-70 truck developed by General Steel Industries, Inc., for the new PATH cars...utilize Houdaille Rotary Shock Absorbers to insure a smooth and comfortable ride.

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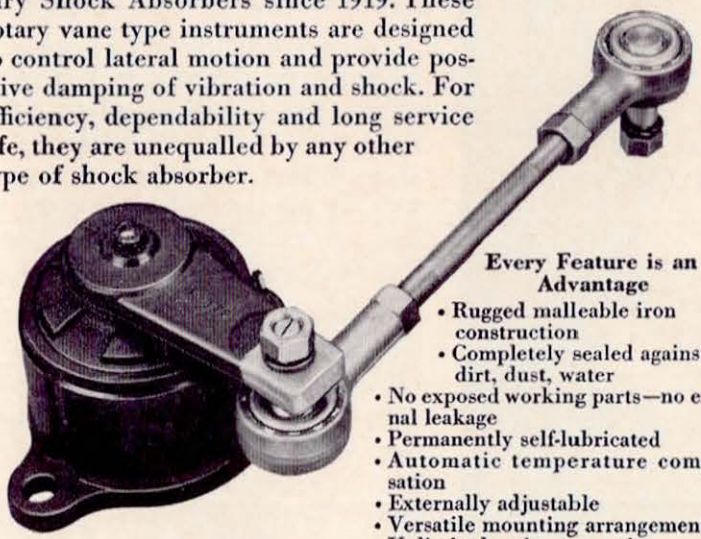

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in 1965, even though the "acceleration rate" over 1964 was down to 1.1% for the year's first half.

A primary recommendation in the erport called for closer determination of damage causes through factual inspection, so corrective action can be taken. Other suggestions were for continuing programs to improve the physical condition of freight carrying equipment; increased activity among railway operating personnel to prevent rough handling; and more attention to the organization and activities of prevention personnel on individual carriers.

Better communication between L&D and operating personnel was stressed by Dallow as another essential. But it appears, he said, quoting a Railway Age survey (March 29, p. 48), to be one which is overlooked by railway L&D and claim prevention men.

The clean car situation, according to J. Robert Morton, general traffic manager, Combustion Engineering, Inc., Windsor, Conn., has shown a modest improvement over a 10-year period, but appears to have deteriorated slightly between last year and this. He put the total cost of dirty cars at more than $80 million for the 12 months ended Aug. 31—when expense of actual cleaning, of switching to and from cleaning tracks and of loss of use are all considered. And he pointed out that if there had been no unclean cars, the available car supply would have been increased by 14,553 cars per week; the railway investment in cars reduced by $550 million.

A resolution proposed by Morton, and approved, requested railways to transmit to officers of NASAB, for "views, opinions and suggestions, any proposals which may have drastic effects on activities of advisory boards." Clearly spelled out as the target of this resolution was Classification Docket No. 233, in which the railroads propose a $25 penalty charge for failure of a billed consignee to unload a car "clean."

• **New officers; future meetings.** Koerber, executive secretary of the Coal Traffic Bureau, Pittsburgh, was elected president of NASAB for 1965-66. He succeeds Avery M. Cloninger, of New York, director of transportation, Great Northern Paper Co., who presided over most of the Los Angeles sessions. Other incoming officers are R.W. Buck, traffic manager, Stearns & Foster Co., Lockland, Ohio, first vice president; R. R. Wages, traffic supervisor, Northern Natural Gas Co., Omaha, second vice president; and L. K. Mathews, TM, Missouri Portland Cement Co., St. Louis, secretary.

Future meetings are scheduled for Pittsburgh, 1966; Chicago, 1967; and Las Vegas, Nev., 1968. ■

MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended Oct. 23 totaled 622,628 cars, the Association of American Railroads announced on Oct. 28. This was a decrease of 10,429 cars, or 1.6%, compared with the previous week; a decrease of 14,431 cars, or 2.3%, compared with the corresponding week last year; and a decrease of 2,545 cars, or 0.4%, compared with the equivalent 1963 week. Ton-miles generated by carloadings in the week ended Oct. 23 are estimated at 14.6 billion, an increase of 2.9% above the corresponding week of 1964, and 8.3% above the 1963 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, Oct. 23 District	1965	1964	1963
Eastern, including Allegheny and Pocahontas ..	247,930	241,187	244,728
Southern	117,709	123,378	119,610
Total Eastern and Southern Districts	365,639	364,565	364,338
Northwestern .	87,513	98,256	86,528
Central Western	126,992	132,018	130,780
Southwestern .	42,484	42,220	43,527
Total Western Districts	256,989	272,494	260,835
Total All Roads	622,628	637,059	625,173
Commodities:			
Grain and grain products	57,042	65,308	65,934
Livestock	6,019	6,043	7,075
Coal	122,380	118,928	117,591
Coke	7,470	9,683	6,784
Forest Products	40,290	40,027	39,034
Ore	43,409	53,280	44,078
Merchandise l.c.l.	8,223	10,851	16,119
Miscellaneous .	337,855	332,939	328,558
Oct. 23	622,628	637,059	625,173
Oct. 16	633,057	630,345	625,923
Oct. 9	614,214	623,840	635,927
Oct. 2	603,093	611,229	632,116
Sept. 25	585,129	615,152	621,612
Cumulative total, 43 weeks	24,383,175	23,956,400	24,041,700
Estimated revenue ton-miles (billions) 43 weeks ...	571.0	544.0	515.5

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended Oct. 16 totaled 22,369 cars, compared with 19,193 for the corresponding 1964 week. Loadings for 1965 up to Oct. 16 totaled 823,173 cars, compared with 716,308 for the corresponding period of 1964.

IN CANADA.—Carloadings for the seven-day period ended Oct. 7 totaled 86,277 cars, compared with 114,812 for the previous nine-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Oct. 7, 1965	86,277	25,517
Oct. 7, 1964	84,490	21,932
Cumulative Totals		
Oct. 7, 1965	3,006,502	955,045
Oct. 7, 1964	3,019,938	938,232

FREIGHT-TRAIN CARS

► *Great Northern.*—Ordered 45 70-ton bulkhead flat cars and 25 100-ton bulkhead flat cars from General Steel Industries. All cars will be equipped with roller-bearing trucks and end-of-car cushioning devices. Deliveries are scheduled for second and third quarter 1966.

► *Rio Grande.*—Ordered seven 125-ton bulkhead flat cars from General Steel Industries, Inc., Castings Division. The cars, to be delivered in January 1966, will be specifically designed for hauling containers of molybdenum ore between Questa, N.M., and Washington, Pa.

► *Trailer Train.*—Placed orders for an additional 491 cars. ACF will supply 68 low-level flat cars; Bethlehem Steel, 223 standard level flats; and Pullman-Standard, 200 standard level flats. This brings Trailer Train's purchases so far this year to 6,097. When the new order is delivered, the TTX fleet will number 27,901 cars.

ORDERS AND DELIVERIES

► *Backlog rises.*—Orders were placed in September for 7,821 new freight cars, compared with 8,801 in August. Orders for new cars totaled 3,992 in September 1964. Deliveries in September totaled 6,331 cars, compared with 5,033 in August and 4,314 in September 1964. Of the new cars delivered in September, 4,415 were produced by contract car builders and 1,916 by railroad shops. On Oct. 1 the backlog of cars on order and undelivered totaled 42,222 (of which 12,082 are to be built in railroad shops and 30,140 in the shops of contract car builders). The Sept. 1 backlog was 40,737 cars; the backlog one year ago, on Oct. 1, 1964, was 31,201 cars. **REBUILDS:** Deliveries of rebuilt cars—those reconstructed at a cost of more than 50% of comparable new-car cost—totaled 1,001 in September. The number of new cars scheduled for rebuilding on Oct. 1 totaled 8,802, compared with 5,974 on Oct. 1, 1964.

FOREIGN

► *New Zealand.*—Seeks bids on the supply of 17 diesel switching locomotives (12 with a maximum axle load of 10 tons and five with axle load of 12½ tons). Bid deadline is Jan. 21, 1966. Tender documents may be obtained from the New Zealand Senior Trade Commissioner, 1145 19th Street, N.W., Washington, D.C. 20036. Bids are also sought on the supply of 600 freight cars, deadline Jan. 14, 1966. Tender documents are available from the High Commissioner of New Zealand, Haymarket, London, England, or from the Comptroller of Stores, New Zealand Government Railways, Wellington, New Zealand.

NEW FACILITIES

► *Rock Island.*—Will spend $1.3 million on improvements to piggyback facilities near downtown Chicago (RA, Oct. 25, p. 36). Major elements in the project include installation of 11 depressed loading-unloading tracks with 81-car capacity; construction of a 25,000-sq-ft terminal building with dock space for 110 trailers; paving of parking space for 550 trailers; construction of a 3,000-sq-ft truck-maintenance garage. Both the terminal building and garage will be used by Rock Island Motor Transit.

YOU OUGHT TO KNOW

IC gets crew award: A crew-consist award to Illinois Central last week gave the road a green light to go ahead with its plan to automate ticket collection in Chicago's suburban service. The award gives IC the right to operate eight and ten-car trains with a conductor and a trainman, and two or four-car trains with only a conductor. IC promptly made its usual severance offer to affected employees and also offered an alternative plan for employees who might find it more attractive. An IC spokesman described the alternative plan as directed toward employees hired before Jan. 25, 1964. If those employees accept another job offered by IC, the road will give them $2,000 cash and guarantee them the jobs (paying a minimum of $622 per month) for five years.

Pact ends divisions fight: The general division agreement between eastern and western railroads should end the 11-year-old fight about how to divide revenues from joint rates on transcontinental traffic. The agreement was anticipated several months ago when the Southern Pacific, Cotton Belt and Rio Grande reached a settlement with eastern roads (RA, June 14, p.8) The interested railroads have followed through at the ICC to implement the pact. They are asking the Commission to vacate its 1963 order in No. 31303 which prescribes a new basis for the divisions involved. Western railroads are also expected to drop appeals now pending in the courts. Estimates indicate that the Commission's order would have shifted about $50 million a year from western roads to eastern and midwestern lines. The compromise is expected to cut this total to something like $30 million.

Federal funds for New York transit: The New York City Transit Authority is ready to go shopping for 400 new rapid transit cars, now that the Housing and Home Finance Agency has approved the city's request for a grant of $23,420,000 to help pay for the cars (RA, Oct. 11, p. 82). The federal money is being made available under the Urban Mass Transportation Act of 1964, which authorizes grants and loans for the construction and improvement of transit facilities in urban areas. The HHFA and the Authority will split the cost ($46,840,000) of the new cars, which will replace cars that are between 34 and 61 years of age.

Income at third quarter: Reports are beginning to come out on railroad earnings through the third quarter, and among the first roads to report continuing good times are the Norfolk & Western, Pennsylvania, and New York Central. N&W is jubilant over the highest net income for the first nine months of any year in its history. The road earned $7.10 a common share for the three quarters—up more than 10% over the corresponding period in '64. PRR profit in the third quarter alone jumped 43% over a year ago to $10,080,485. For the nine months, the railroad's profit rose 27%, to $1.72 per share. Consolidated income for the Pennsylvania for the nine months was up 19% to $46.2 million, or $3.34 a share. New York Central's nine-month profit climbed 27.5% to $22.2 million, or $3.27 a share.

Jobless pay challenged: Western Pacific and Southern Pacific, in a class action on behalf of other roads, have gone to court to challenge payment of unemployment compensation to certain firemen, who were affected by the award of Arbitration Board 282. The complaint charges that a ruling by the Railroad Retirement Board enabled a number of men to get benefits improperly—because the men had been offered other jobs, declined them, and collected severance pay. WP and SP are asking for an order to prevent further such payments by RRB.

Truck tonnage: Intercity truck tonnage in the week ended Oct. 16 was 1.2% below that of the preceding week, and 8.4% ahead of volume in the corresponding week of 1964, according to American Trucking Associations.

Current statistics

Net Income	
6 mos., 1965	$335,000,000
6 mos., 1964	330,000,000
Carloadings, revenue freight	
43 wks., 1965	24,383,175
43 wks., 1964	23,956,400
Freight cars on order	
Oct. 1, 1965	42,222
Oct. 1, 1964	31,201
Freight cars delivered	
9 mos., 1965	54,855
9 mos., 1964	51,440
Serviceable cars	
Sept. 1, 1965	1,402,904
Sept. 1, 1964	1,408,778

James D. Sutton
NYC

Robert F. Lawson
NYC

Boyd B. Brownell
EMD

Richard L. Terrell
EMD

PEOPLE IN THE NEWS

NEW YORK CENTRAL.—James D. Sutton, director of coal and ore marketing services, appointed assistant vice president—coal and ore, New York, Mr. Sutton will assume the responsibilities formerly held by **Frank P. Soen,** vice president—coal and ore, retired. **Robert F. Lawson,** engineer—maintenance of way, appointed general manager, New York District at New York, succeeding **Edward L. Claypole,** transferred to Syracuse.

QUEENS-LONG ISLAND MASS TRANSPORTATION DEMONSTRATION PROGRAM.—Seymour Kashin, director, announced appointment of **Albert J. Syvertsen** as project manager and **Marvin L. Landsman** as project coordinator.

READING.—J. E. Dattner, superintendent car department, Reading, Pa., retired Oct. 1, after almost 39 years of service with the Reading. The following appointments have been made in the Mechanical Department at Reading: **James J. Butler,** general mechanical superintendent; **Robert R. Eyrich,** mechanical superintendent—freight equipment; **Harry O. Ludwig,** mechanical superintendent—passenger and special equipment; and **Donald C. Lengle,** mechanical superintendent—locomotive equipment.

TRAFFIC EXECUTIVE ASSOCIATION. — EASTERN RAILROADS.—Charles S. Baxter, vice chairman at 1 Park Avenue, New York, elected chairman of TEA; chairman, Coal, Coke & Iron Ore Committee—Trunk Line Territory Railroads; and the Coal, Coke & Iron Ore Committee—Central Territory Railroads, succeeding **R. C. Gill,** who retires Nov. 1 under the Association's pension plan. Mr. Gill, who has served the railroad industry in Eastern Territory for more than 40 years, will retain his interest in coal traffic matters, in a consulting capacity to the Association on coal traffic matters. **C. L. Smith,** for several years a staff member of the General Freight Traffic Committee, has been appointed chairman, General Freight Traffic Committee—Eastern Railroads.

Supply Trade

Boyd B. Brownell, director of engineering and research, **Electro-Motive Division, General Motors,** La Grange, Ill., has been appointed general manager of that division, succeeding **Richard L. Terrell,** named general manager, Frigidaire Division, General Motors, Dayton, Ohio.

William L. Mathews, Minneapolis district manager, **Tank Car Division, General American Transportation Corp.,** has been appointed Western region sales manager, and **Robert F. Anthony,** formerly Cleveland district manager, named Eastern region sales manager. Both will have headquarters at Chicago.

OBITUARY

Lester J. Hurckes, 72, retired general freight agent, **Chesapeake & Ohio,** died Oct. 17 in Illinois Masonic Hospital, Chicago.

Judson Cole McLester, 57, former vice president and general counsel, **Jersey Central,** died Oct. 22 at his home in Westfield, N.J. Mr. McLester retired in January to enter private practice.

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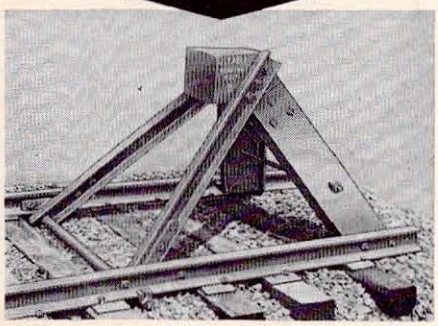

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WATCHING WASHINGTON

WITH WALTER TAFT

TAFT

● **IN THE AFTERMATH** of Congress' adjournment has come new hope that sidetracked priority items on the railroad industry's legislative program may get somewhere next year. These items are the industry's calls for more rate-making freedom, and for the imposition of adequate charges for use of publicly-provided transportation facilities, such as waterways, highways, and airports.

The new hope is inspired by revelations from top Johnson-Administration sources. These sources put transportation high on the list of the President's developing legislative program for 1966. In effect, they restate what the President said himself last August, i.e., that transportation policy proposals will be part of the "substantative legislation" he will recommend next year (RA, Aug. 30, p. 74).

RECOMMENDATIONS in line with the railroad program may be expected. As to user charges, the President already has that proposal before the House Committee on Ways and Means. As to more rate-making freedom, all authoritative Administration pronouncements still refer to LBJ's past calls for "greater reliance on competition" in transport regulation.

TRANSPORT LEGISLATION of the adjourned session does include a big plus—the law which authorizes the Department of Commerce to continue its studies of high-speed ground transportation. These studies are to be nationwide in scope, but the initial demonstrations will be passenger-train operations on the Pennsylvania's New York-Washington line.

THE RAILROAD INDUSTRY had no official position on this legislation, but there was no railroad opposition. And PRR is an enthusiastic supporter of the research program. Congress appropriated $18,250,000 to finance it for the remainder of the current fiscal year. As now projected, the study is a three-year undertaking expected to cost a total of $90 million.

SETBACK for the railroads was enactment of Public Law 89-212. This liberalizes spouse-annuity benefits of the Railroad Retirement Act and raises the taxable earnings base to $550 per month, from $450. Sparked by the AAR, the industry's opposition to this legislation was of the all-out variety.

THAT CAMPAIGN succeeded "only in getting us time to draw a breath before assuming the additional burden," as one Washington representative of the railroads puts it. He has in mind that provision of the law which cut the pay roll tax rate for this year's last quarter. A four-step restoration of the cut will begin Jan. 1.

THE "GRAY-AREA" ACT is the only general transportation legislation enacted this year. It is designed principally to curb illegal for-hire trucking. Other provisions give shippers the right to recover from truckers or forwarders charging unlawful rates. This is a gain for more uniform regulation, since the Interstate Commerce Act already had reparations provisions applicable to railroads and water carriers.

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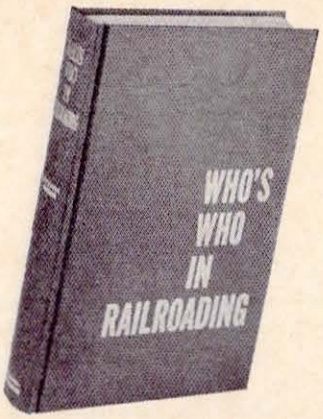

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THE ACTION PAGE

All urban travel by highway?

Most of the resistance to improvement of urban passenger transportation by rail, up to now, has come from highway interests whose primary concern is not, obviously, the welfare of the public as a whole. Now, however, has appeared a book, "The Urban Transportation Problem," which is a research project of the Rand Corporation (in the financing of which the Ford Foundation joined). The book has as its authors three professors from Harvard University, which has published the book.

The trio of researchers is headed by the well-known economist, John R. Meyer, with John F. Kain and Martin Wohl as his associates. These analysts would place far more reliance on the private automobile for future urban passenger transportation than other objective researchers* have been inclined to do.

While urban mass transportation of passengers is being greatly improved (actually or in the planning stage) in a few areas, the problem is still far from final solution. The building of highways continues at a frantic pace—with little or no tangible progress in integrating highway planning with that for efficient mass transportation. The subject is a controversial one; and the book by the three Harvard professors will add to the controversy, as much as it will aid in resolving it. The jacket on the Harvard book presents "the other side" of the argument quite candidly. It says:

"The transportation situation in the United States has set off a controversy affecting every major city in the country. While proposals and counterproposals are being suggested by supporters of various methods of mass transportation, certain views are widely held: (1) urban transportation is in a 'mess' which is steadily worsening qualitatively; (2) the decline in city populations is largely attributable to the lack of good, or at least up-to-date, mass transit facilities; (3) rail transit is probably cheaper than private automobile travel in urban areas; (4) people will ride transit if it is available at an adequate level of service and a reasonable price; (5) the type of urban transportation available is a very important factor in shaping the character or form of a city."

This paper believes that the five foregoing conclusions —which the Harvard authors would question—are, in large part, true. Furthermore, most of the recognized reseachers in the area of urban transportation would appear to agree. We would hope and expect that the urban planners who do not go along with the Meyer-Kain-Wohl views will examine them critically.

The authors put great emphasis on the obvious tendency of businesses and homes to abandon the central city, and to scatter to suburban areas. The question is: To what degree would this movement to Scatteropolis slow down, or perhaps be reversed, if urban transportation by rail were more widespread, faster, more frequent, and less expensive (compared to movement by highway) than it is? This question cannot be answered, conclusively, until one or more urban areas are provided with rail transportation as up-to-date (and at charges that are as big a bargain to the users) as parallel superhighways are.

The Harvard scholars say that people have "come to prefer the automobile for virtually all shopping, social and recreational trips, and increasingly, for commuting to work as well." It may well be, say the authors, that most people would prefer an "automobile solution" to their urban transportation needs, even if it is costly.

What determines the choice?

A large part of the attractiveness of movement by automobile lies in its intrinsic superiority—in convenience and economy—for *some* kinds of trips. But who can be sure that having Uncle Sam pay a large part of the bill when we travel by highway is not often the main factor which determines the choice?

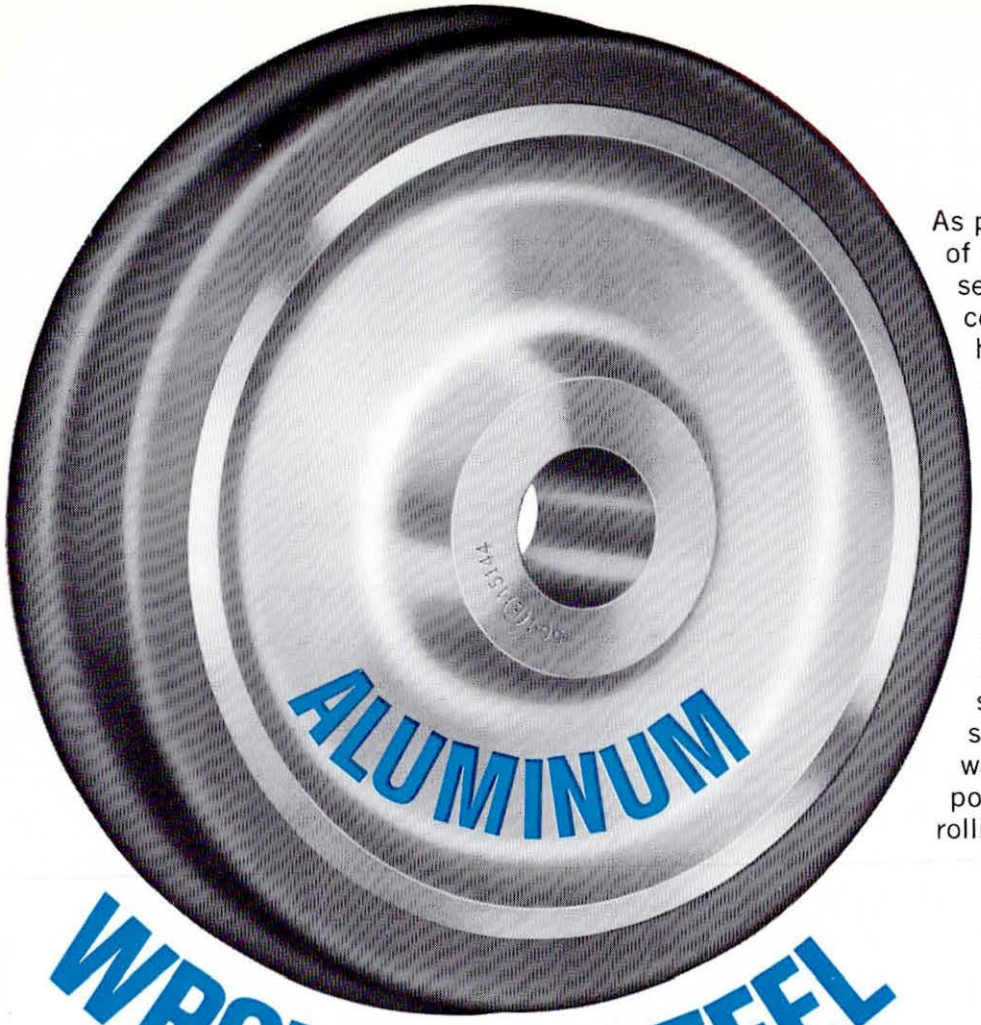
The Harvard authors believe that a combination of the private automobile with the bus is almost always as economical as rail movement (or even more economical) in cities of medium size. It is only in the o'der and larger cities which already have rail service (the Harvard trio concludes) that further development of such service may be advisable.

But the authors go on to point out that the only alternative to "expending very large amounts of money" for improved urban transportation, whether by rail or highway, lies in "disciplining the use of urban highways." What they mean by "discipline" is such devices as charging more for highway use during peak periods —and in incentives to encourage car-pooling. In substance, this proposal is equivalent to differential pricing, paralleling differences in costs.

If the American motoring public could be led to accept differential tolls as a means of relieving traffic congestion on urban highways, they could probably also be induced to accept the toll principle for all highway financing. In that happy event, the rivalry between rail and highway transportation could be based on the comparative economy of each. It is not our understanding that highway interests are ready to accept that principle. Until they do, the survival and healthy growth of urban rail transportation, in most places, will require some governmental favors to offset those which have already been heaped on highway transportation.

The case for the private automobile and bus in urban transportation has been ably presented by Messrs. Meyer, Kain and Wohl. With many of their conclusions we do not agree, but it is well for optimists on the future of urban travel by rail to be familiar with them.

*E.g., Lyle C. Fitch in his "Urban Transportation and Public Policy" (Chandler Publishing Company, San Francisco).



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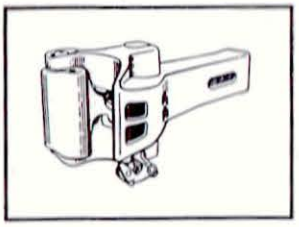

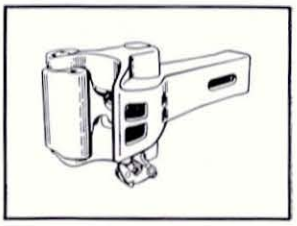

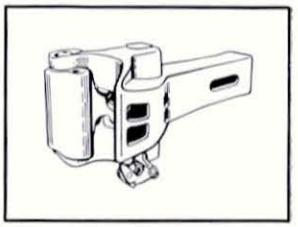

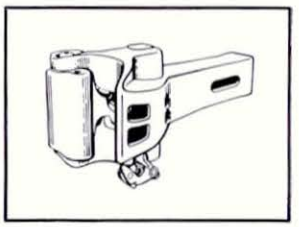

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